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Vol. XIX

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No. 3

Original Articles

INDUSTRIAL SURGERY AND ITS SIMILARITY TO WAR SURGERY.*

H. N. TORREY, M. D.

DETROIT, MICH.

Industrial medicine and surgery is fast taking a most important place in the realm of medicine. The industrial army is far larger than our A. E. F., and its casualties in dead and wounded are far greater. The employer and employee are demanding better medical and surgical attention than ever before. The profession has heard the call—six medical schools have already installed departments in industrial medicine and surgery—medical men everywhere are realizing that this field is a specialty and are preparing themselves for this work. The following quotation from an authority on this subject shows how enormous the field is:

- A: Plant sanitation.
- B: Prevention of occupational diseases.
- C: Prevention of accidents.
- D: Health supervision of employees by (First) physical examination; (Second) Examination of applicants; (Third) Educational propaganda; (Fourth) Prevention against contagious disease.
- E: Surgical care of injured.
- F: Supervision of medical treatment.
- G: Care of tuberculosis, syphilis, etc.
- H: Visiting nurse, social service.
- I: Improvement of home conditions.
- J: Improvement of community conditions.
- K: Co-ordination and co-operation with all forms of welfare service in industry.

The industrial man-power of the nation must be conserved and utilized to the last advantage. The employer finds, aside from the humanitarian aspect, that it pays to take care of his men—he joins hands with the employee in demanding the best medical service. The

*Read before the Wayne County Medical Society, September 29, 1919.

Government and State are interested, and all look toward the medical profession. The profession has handled this problem before, but now prepares to handle it in a far better, more scientific and systematic manner. Our recent experiences in the War have lent much impetus to this work. As it required additional training for the civilian surgeon to be a war surgeon, so will it require additional training and experience for the civilian surgeon to be an Industrial Surgeon. I have been much impressed since my return from France by the many points of similarity between War Surgery and Civilian Surgery, and more especially Industrial Surgery. I have been much interested also in applying the lessons I learned abroad in my industrial work, and the results even in this short time have been most gratifying.

Owing to the small amount of time allotted to this paper, I can go into the subject in only a general way.

First and foremost in Industrial Surgery, it is as important as in War Surgery to get the man back in the Line as quickly as possible, and in the best possible condition. The wounded man must be cared for quickly and efficiently in the First Aid Station (or the factory). He must be properly splinted for transportation, and finally upon arrival at the Evacuation or Base Hospital, he must have the benefit of the most approved and up-to-date methods and equipment. Briefly, and under the following heads, I wish to show how some of the War lessons may be applied to the problems of Industrial Surgery.

WOUNDS.

Industrial wounds, while as a rule much less severe and much less contaminated than those in War, are fundamentally the same and yield even more readily to the same treatment. Debridement or mechanical sterilization by removal of the macerated tissues and foreign bodies, hemostasis, followed by primary suture is sufficient for a large percentage of these wounds.

I wish to add one word of warning regarding primary sutures. Do not make them ex-

cept under ideal conditions unless you can keep in touch with the case. Should the wound become infected, Dakinize, later doing a delayed suture or secondary suture, depending upon the results of the bacteriological examination. We have found that the clinical aspect of the wound is not always a safe guide as to the time for secondary suture. The wound infected with a hemolytic streptococcus, many times looks very well clinically, but it will not heal following secondary suture. The bacteriological examination, together with the clinical condition is the ideal method. In this connection I wish to call attention to the large amount of time lost in many cases in which we allow wounds to granulate and heal. This long period of granulation and healing can in most cases be avoided by secondary suture, thus saving a great deal of time and giving a much better result. Both of these factors are naturally of great importance in Industrial Surgery. Granulating wounds and burns are best treated with one of the paraffin dressings.

FRACTURES OF THE LONG BONES.

Four lessons in Bone Surgery taught by the War were especially impressed upon me. (First) The excellent results in the majority of cases which can be obtained by mechanical measures properly applied and painstakingly followed up. With this technique, the number of cases left for open operation will be very small. (Second) The closure of wounds in compound fractures, thereby making simple fractures. (Third) The restoration of function and reconstruction. (Fourth) Joint Surgery.

I need not say that all the points enumerated above are new; but never before have we had such an opportunity to prove out a method, old or new, and to observe results in such a large number of cases. I will take these points up now in a little more detail.

In regard to the mechanical treatment of fractures, I feel that we are especially indebted to our orthopedic brothers for the further development in this line of treatment, and for the demonstration of what can be done with it. I feel personally that I have been rather impatient in my fracture work, and rather prone in some cases to operate my fractures without giving the patient the full benefit of the best mechanical treatment. By mechanical treatment, I do not mean applying the Thomas or any other splint in any condition, but the proper utilization of mechanical measures, these measures to be followed up with the greatest care day by day and the results checked

up at the same time with very frequent radiographs. Splints, Balkan frames, etc., which have been developed during the War should have a wide use in Civilian Service, and we have already found them of great value in our Industrial work. In the Surgical Service of the Michigan Mutual Liability Company, besides using the Thomas splint in our treatment work, we are also equipping all our First Aid Stations in the large factories and our ambulances with these splints. In this way, our patients will be transported to the hospital in the best possible condition. (For those interested a list of these standard splints together with the directions as to their use can be obtained from the Surgeon General's Office.) In selected cases, the ice tongs or callipers are of great value—the Chutro stirrup also has many advocates.

It is not within the scope of this paper to deal with the great advances and the value of the X-Ray in War Surgery. I wish to call attention, however, to the great aid in finding foreign bodies which the improved technique gives us. It might also be of interest to know that Dr. P. M. Hickey and myself are at present working upon an improved fluoroscopic table, by means of which fractures may be reduced by mechanical means under the observation of the fluoroscope.

In my service at Harper Hospital and the Michigan Mutual Hospital, we have a series of compound fractures which we have converted into simple fractures. The result I hope to report later. I may say at this time, however, that our results have been most gratifying. Our technique is as follows: As soon after the fracture as possible, the wound is carefully explored, the macerated tissues and foreign bodies removed, flushed out with ether, and closed with primary suture. A retention splint or a small amount of extension is employed. Special care is taken not to add to the trauma, and the part is left at rest until healing of the wound has taken place. As soon as the healing has taken place, the problem is greatly simplified; and the case is handled like any other simple fracture. The patient is carefully watched during this procedure and should infection develop in spite of all precautions, the wound is at once opened freely and the Carrel-Dakin treatment given.

Osteomyelitis is treated by wide incision and drainage—draining both the soft tissue and bone, thereby allowing the Dakin's solution access to all infected parts. Later the bone

cavities can be filled with muscle or fascia and the wound closed by secondary suture.

Restoration of function does not necessarily follow bone union. Judicious mobilization of fractures, and not complete immobilization, is the treatment aimed at. The fracture should be so splinted that the bones are in proper position, and yet at the same time exposure is left for massage and in certain cases for passive and active motion. This is especially important in fractures of joints, when movement must be started early.

Joint surgery shows many advances. In brief, the treatment consists of the debridement, complete closure of the joint and motion. Infected joints show the most astounding results following this mobilization treatment.

Reconstruction and re-education of the crippled for other lines of work, and other post-war measures are of great interest, and of the utmost value to Industrial Surgery. The subject is too large a one to go into this paper, but I feel that we should note carefully any advances in the work, and apply them to our Industrial work.

ABDOMINAL SURGERY.

I was especially fortunate to have had considerable experience with gun shot wounds in the abdomen. Our results were fair, the prognosis depending upon the time elapsed since the injury and as to what portion of the intestine was injured. We found that lesions of the large intestines meant a higher mortality than lesions of the small. The treatment consisted of free exposure, repair of the lesion, dry sponging and closure of the wound, except in those cases of extensive contamination of the abdominal cavity.

THORACIC SURGERY.

We learned from our experience that the lung could be freely exposed and could be easily handled—that empyema could be cured by repeated aspiration in some cases. When a rib resection was necessary, the pleural cavity was Dakinized and when bacteriological examination indicated, the opening was closed by secondary suture, and a long convalescence avoided.

Advances were made in the treatment of shock, and in blood transfusion. Every up-to-date Industrial hospital should have shock beds and the treatment of shock and of blood transfusion should be second nature to an Industrial Surgeon. Antitetanic measures should be more emphasized in Industrial work than ever before.

In closing I wish to say again that Industrial Surgery is fast becoming a specialty in the field of medicine, and that the coming Industrial Surgeon will be especially trained and experienced in this work, and last, but not least, he must utilize in this work the lessons and principles developed by this great war.

WOUND SHOCK.

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BAY CITY, MICH.

The importance of traumatic shock as a complicating factor in wounds and surgical conditions, and its obscure nature led a number of men in France to investigate causes, and particularly to institute rational methods in combating it.

There have been many and divers theories put forth to account for it. These difficulties lay not only in the peculiar nature of shock, but in its attendant conditions such as shock and sepsis.

It is not the purpose of this paper to go into all the theories and lines of investigations followed. We will only give a few which, to our mind, have some bearing on the nature of shock.

1. The blood changes. The first peculiarity of the blood in shock is the high capillary count. When hemorrhage is a complicating factor, these high counts are striking, indicating a concentration of blood at least in the superficial capillaries. The difference of the capillary to the venous count was very marked, amounting to over 2,000,000 in some cases and in nearly all to over 1,000,000. The difference between capillary and venous count is further confirmed by haemoglobin estimations. These differences were from 7 to 20%. Shock is frequently complicated by hemorrhage. In these conditions the capillary count may be low. But when a comparative count is made with the venous blood the difference is very obvious.

We used to hear—In shock a person bleeds into his own abdominal veins. Surgeons testify that on manipulating the peritoneum that they could produce shock. But this is not primary shock. We did not notice this splanchnic congestion on cases in shock along the Western front.

Therefore we believe that this "lost" blood is in the capillaries; i. e. that there is a capillary stagnation.

2. Cannon worked on the theory that an important factor in shock was an acidosis and instituted treatment towards combating acidosis. Now Cannon had a wide experience and at the Laboratory at Dijon, he demonstrated on animals that there was an acidosis in shock. He says—"There is evidence that acid or a change in the blood in the direction of acidity is observed, and has a depressive effect on the blood pressure." He believes that the trauma causes a breaking down of muscle tissue with an increased outpouring of sarcolactic acid into the circulation, which uses up the available CO₂ and consequent acidosis. From this it would be expected that by the injection of large amounts of Bicarbonate of Soda solution one would overcome the state of shock. But this did not work out in practice. In common with several workers we infused large amounts of Sodii Bicarb 4% solution, intravenously and could not observe any beneficial results aside from the benefit they got from the water. We could not see that it raised the blood pressure *per se* or lessened their state of shock. Finally we discarded its use altogether. We think, and we think Cannon also believes, that any acidosis these cases have, is a result rather than a cause.

3. Acapnia Theory of Yandell Henderson. These workers went on the theory that a reduction of the CO₂ of the blood was a causative agent. They produced low Blood Pressures in animals by vigorous artificial respiration, and said that the lowered CO₂ content was the main thing in producing shock. But this is not the picture of men in shock. Deep respirations are necessary to cause a marked diminution of CO₂ in the blood and in shocked persons they usually breathe very shallow.

4. Then there is the shock that is noticed after removing a tourniquet that has been on for some hours. This was noticed in several cases.

There are many other theories to account for this thing we call shock. Some of them are Fat Emboli, the Adrenal exhaustion Nerve exhaustion and others.

We do not know the prime causative agent in shock, but we do believe that there are many important factors involved. We do know that these people have pain, and that at times their tissues are devitalized. We know that for some reason or other that there is a stagnation of the venous flow, and a low blood pressure, very low, indeed, at times. Fatigue and lack of proper food, or entire lack of food for days, living in the open and in the wet, living under a severe nervous tension was the lot of

most of the cases we dealt with, and we believe that these prior conditions entered as an important factor. Then too, there was the transportation over shell torn roads, and we know that many cases left the field hospitals in good shape, only to arrive to us in a very grave state. This was particularly true of the compound fracture thigh cases.

As to types of cases we would say from our series that the most profound cases came from injuries of the back. Our mortality from this class was 58.06%. Our mortality in abdominal cases was 52%, and compound fracture cases ran to 36.58%. The chest injuries did not suffer to the same extent as the others from shock. Head injuries involving a fracture of the skull did not present a picture of shock as we understood it. They had a high blood pressure and usually a very slow pulse. Another very noticeable thing was the degree of shock persons had who suffered from multiple wounds of the soft parts, i.e. torn muscle tissue. Of 32 cases of this type, our mortality was 41.01%—rather high.

The Blood Pressure. For a long time this was our greatest prognostic factor and also our criterium as to what form of treatment the patient received. Even yet we believe a knowledge of the blood pressure to be extremely important, and should be known in all cases. We only considered the maximum pressure. We found the spring instrument satisfactory and used the Tycos, Sanborn and others. Blood pressures in some cases were unbelievably low—40-50mm systolic—and sometimes we couldn't record them on the instrument. 80 mm systolic sustained for an hour was the minimum of permitting operation. In a few cases with extensive gas poisoning, operation was permitted earlier, but preferably under gas-oxygen anaesthesia. Ether always causes a drop in blood pressure and in cases where the pressure is prone to be low, it is unwise to give ether. Cases where the pressure was below 60mm. and could not immediately be raised were hopeless. At 40mm, nothing could be done as these poor fellows were doomed from the beginning.

Treatment. What can we do for shock? What are our criteria for various methods of treatment? In spite of some of the obscure causative factors, what are broad rational rules for treatment? When should we and when should we not use blood from another? And what further criteria can we gain. These are pertinent questions to answer.

To quote Cannon—"Whatever the nature of the bodily changes which underlie the state of shock, it is evident that the circulatory

functions are in a precarious condition, and that the heart, nervous system and other organs are suffering from an insufficient blood supply. Everything should be done to promote the factors favorable to the restoration of a normal and stable blood flow and anything unfavorable to such restoration should be scrupulously avoided."

Warmth by the hot water bottles, or the hot air frame, and plenty of warm blankets are essential. In cases of moderate shock, the placing of several hot water bottles together with plenty of blankets suffices for warming them. These bottles should be placed at soles of feet, and between the thighs and between the arms. One should be placed on the abdomen and both hands caused to rest on this bottle, thus giving warmth to both palms.

If the case was severe, we used a hot air frame such as is used in sweating nephritic patients, with the exception that they were closely watched to prevent sweating. Perspiration, obviously would be bad for these cases as they already had lost too much fluid. We used an alcohol burner with pipes leading into the frame and many blankets thrown over the frame so that we had a minimum dissipation of heat.

Although these patients are prone to vomit, it is well to insist on plenty of fluids by mouth, either in the form of hot coffee, hot soup or water. They should also receive fluids by rectum, and especially so if it can't be retained by mouth. Quarts of water is what they need; not cupfuls.

As to the use of drugs there is not much to say. The one great drug is morphia, of which all our cases received liberal doses. It does stop pain and, we believed, aided in equalizing the circulation. The French used a good deal of Camphor (5cc in oil). We used it for a time, but its results are variable and uncertain. The same would apply to Digitalis and Pituitrin. We thought it good therapy to use them, but did not consider them in the same need as fluids.

This brings us to the question of intravenous infusions and transfusions which were extensively practiced along the Western front by officers having charge of this kind of work.

We had been taught that the infusion of normal saline caused a rise in blood pressure, which after a time would fall even below its original figure, due to a too rapid elimination by the kidneys of the saline, with a consequent greater concentration of the formed elements of the blood. This was true on animals in experiments done at the laboratory at Dijon.

So they tried to find a fluid which could be infused without too rapid elimination and which was of a similar viscosity of the blood and which would raise the blood pressure and sustain it. They finally used a solution of 6% Gum Arabic in normal saline. For a while thousands of infusions were given and then a storm of protest arose. These officers said that it caused severe chills, lowered the blood pressure and in many many cases was positively harmful. There was merit to these protests as we had a similar experience. But about the middle of August, 1918, our laboratory started making our own gum saline and our chills ceased and the patients had a sustained rise in blood pressure other things being equal. Our reasons for this change in action was argued thus: That the material we used from the central laboratory at Dijon was too old when we received it, that it invariably had a precipitate, and was unsterile. When from our own laboratory we could get a solution made the same day that it was used, when we knew it was sterile, and could positively not have any precipitate, at once our results were good. We now believe that gum saline properly made and used has a distinct place in the treatment of shock. It was our custom to infuse 500-1000cc, sometimes repeated in an hour or so. We believed it a most valuable adjunct in combating shock.

Blood transfusions are a remarkable thing and should be used as a routine if possible in all cases of traumatic shock when one is not in a position to gather definite criteria for other methods of treatment. Remember that a patient does not have to lose much blood or any blood, for you to make your decision. Remember that a blood transfusion properly given is the one great method of combating shock. But it should be properly given. It doesn't matter what method of transfusion you use provided that you are thoroughly familiar with the technic of that method.

We used the Sodium Citrate method and found it eminently satisfactory inasmuch as it could be transported. Care should be made not to roughly agitate the container as it will destroy red blood cells and the platelets. The blood grouping is important and should be made in all cases.

About Oct. 1, 1918, Lee, of Boston, suggested to us that we gain more information by finding out the existing blood volume of the patient. He said, "It is obviously desirable to gain as much information as possible concerning the blood volume and the oxygen carrying constit-

ments of the blood. The Hb estimation and red blood count give only the % in the blood volume at hand. Absolute data can be obtained in the following way—If a haemoglobin or a RBC or both be made and then a known amount of fluid be injected and then the blood estimation be repeated, one has in the reduction of the Hb or RBC by a known volume of fluid, a formula by which the total blood volume can be reckoned.”

“The simplest example of this would be an Hb of 100% immediately before an infusion of 500 cc of fluid which was reduced to 75%.

In this case 500cc caused a 25% reduction. Therefore 500cc was $\frac{1}{4}$ of the blood volume which was 2000cc after the addition of 500cc of fluid. The normal blood volume of a large man may be calculated at about 6000cc. Consequently in the example above, the case's blood volume was $\frac{1}{3}$ of normal and his total Hb was neither 100% nor 75% but $\frac{1}{3}$ of that or 25%. It is believed that a reduction below 60% is dangerous and that a dilution of the relative % of Hb below 25% is not only dangerous but very difficult to maintain since the bodily mechanism will get rid of fluid in order to maintain that level.”

So now we found that we had criteria (1) as to prognosis, (2) as to remedial measures.

(1) Prognosis—We found all cases, no matter what the type or extent of wound, who had a blood volume under 3500cc had a hard time pulling thru, and if under 3000cc they all died. If the Hb was under 40% they died. In some cases that looked hopeless and we found a blood volume of say 4200 cc or more, and an Hb of 50%, we found that in nearly all these cases we could pull them thru. Our prognosis by this method rarely failed us, barring of course the cases of gas toxæmia.

(2) Remedial measures—If Hb was below 40% and blood volume below 4000 cc, blood transfusion was demanded.

If Hb was below 40% and the blood volume was below 3000cc or 2500cc, blood transfusion was of no avail and would be wasting blood. These cases were doomed.

If Hb was over 50% and blood volume was over 4200cc, blood transfusion was not needed, but fluids other than blood such as gum saline, etc.

So now we felt that we had a method of giving us much information in spite of our handicaps in our lack of knowledge of causative agent or agents in shock.

THE CANCER QUESTION.

J. G. R. MANWARING, M.D.

FLINT, MICH.

The results obtained in cancer cases have been at a standstill for some years.

Cancer itself is apparently increasing.

One in every seven people now die of cancer.

Of all cases operated upon for the cure of cancer, we probably cure less than 15%.

These facts justify us in stating that there is a cancer question and that it is a most important one.

While we still lack much desirable knowledge concerning this disease we have a fund of things we do know which justify us in hoping to lower its death rate.

A summary of a few simple facts which bear directly on the cure of cancer may be given as follows:

1. Cancers are all local in their origin and hence theoretically all are curable if accessible.
2. Cancer is not contagious.
3. The occurrence of cancer is not markedly influenced by heredity.
4. Early cancer is not painful and only calls attention by a change in form or function.
5. The majority of cancers are so located that early presence is made known by suspicious objective symptoms.
6. Cancer kills through its limitless spread by direct invasion of adjacent structures and by metastases, hence its cure necessitates that it be attacked before such extension makes its removal or destruction impossible.

In the treatment of cancer just as our results are at a standstill so are our curative measures. Our surgery is as clean and as radical as we well can make it, there are no new methods superior to our old ones for this work, serums are as yet a failure here and radium and the X-Rays have but a limited use in this field and only in skilled hands. The only cures we have had in the past and that we may expect in the future so far as we can foretell, have come from the active destruction of the total growth in place or by the total removal of it from the body.

As no improvement in our treatment seems available we must make our present methods more efficacious and to that end we must get the cases earlier. All authorities are deeply impressed with the necessity for this and organizations are being formed to promote this change by educational measures.

It would seem that this educational program should have three objects, viz.—

1. Education of the laity to understand the nature of cancer, its curability, its early symptoms, and the necessity for early treatment.

2. Education of the physicians generally to *suspect cancer always, to diagnose it sooner, and to forever insist on immediate treatment.*

3. Education of the surgeon to treat these cases to the best advantage for the patients generally as well as individually, and, what is most important if results are to be obtained, *to lead the surgeon to drive home the propaganda he is backing by the results he gets.*

While all this is going on we anxiously await light from the laboratory but we must not diverge from our course to try every proposed remedy put forth and waste our patient's time, which is his most valuable possession, when cancer attacks him.

Nearly all cancer victims give a history of a long course of observations and experimental treatments after the growth is first noted before coming to radical measures. In that period of delay somewhere passed the opportunity of a cure being obtained.

To operate 100 cases of cancer and have 90 die of cancer produces 90 circles of skeptical friends and relatives who believe surgery to be ineffectual to 10 circles who have faith in such measures. This preponderance of pessimism means that other cases will naturally hesitate longer and try everything else before surgical assistance is sought.

Theoretically at least 15% of these patients must stay well to have the popular opinion remain the same as it is and more than 15% of cures must be obtained to have this skeptical attitude toward surgery lessened and earlier treatment made possible.

This pessimism is prevalent among physicians as well as laymen. Those patients who have not seen physicians long before seeking surgical aid are in the minority and physicians must bear no inconsiderable blame for this delay. After all what the patient does about it is always a resultant of his own attitude and action plus his physician's attitude and action.

To reduce the mortality from cancer we as physicians must uniformly insist on early destructive treatment and we as physicians will have the proper enthusiasm for such insistence when we can see our patients cured often enough to remove our doubts and make us enthusiastic in regard to such treatment. Advising a patient to have a radical surgical procedure for cancer is not apt to be forceful enough to influence the patient's action when

given with a mental state of hesitancy, doubt, or even despair, founded on the memory of a long series of such cases who went away, were operated upon, came home and died of cancer.

Through our educational efforts we are now trying to make the people understand that cancer is a local condition and when taken early can be cured by radical measures, yet these same people are thoroughly familiar with nothing but failures to cure by these same methods we are advising. Of course we explain it to them by saying it was too late and they respond by asking why we operated if it was too late; and with the amused suspicion which is so prevalent regarding surgeons, we are excused as needing the money, as hopeless optimists or as being ignorant of the subject.

We must stop saying so often that we operated too late, as it is an admission, quickly taken up, of a rather poor quality of surgical judgment to say the least, and as such does not inspire the confidence we so much desire and which is so necessary to make headway.

Of course we may by our educational efforts teach folks to seek treatment of a surgical kind earlier but surely not when accompanied by too few cures. Such education will only be of material influence when we can show results as good as we talk about.

There should be no legitimate excuse for a cancer of the lip, as large as a dollar and with enlarged glands down to the clavicle, coming to the surgeon and there should be less excuse for the surgeon operating such a case.

For years ovarian tumors have been operated with over 95% of cures until those of us of a recent generation never operate the enormous cysts our text books picture and we never see them. These cases have learned to accept early operation, not because of any educational work as such but because of the good results we all know about.

Just what per cent. of cures we must have to put a stop to the general delay now prevalent no one can say. We probably cure less than 15% of all cancers we operate now and to better our average we must operate earlier and to operate earlier we must cure more. It comes back to the surgeon and advance must be made from within.

If this position is accepted it means that we must change our present habits considerably and try to come to some common agreement in regard to what our methods should be and to more clearly define our limitations, hoping that the harm done by operating unpromising cases will lessen.

With this in mind a survey of treatment with first a few general principles will be suggested:

1. The only agents now available are those of total removal or of total destruction in place.

2. In those cancers which do not often form metastases or do so very late, local measures suffice.

3. In cancers in a location or of such a nature that metastases are usually early, the lymphatic drainage systems should also be removed.

4. Specimens should not be cut out of growths for examination. It is only comparatively rarely that the surgeon cannot make a clinical diagnosis of sufficient accuracy to warrant suitable treatment. In those cases where doubt does exist the growth may be removed as a whole and a section made from the specimen at once and examined. Before proceeding with the operation any part of the field which may have been contaminated should be cleaned or excluded.

5. Partial operations should not be done. Palliative operations should be cut down to a minimum; the excuse of palliation is often just an excuse to appease the patient and friends. Palliative treatment, less than radical surgery, should be encouraged but *never should radical operation be done as palliation in the surgeon's mind and hope of cure in the patient's mind.* It seems that just here is the difficulty; for it is easier to attempt something than to turn aside the patient and his pleadings that he be given a chance. Practically every patient accepting operation does so in the hope of cure when very often his surgeon knows he cannot be cured.

6. All operations should be as bold and as radical as conditions justify. Many breast amputations are called radical when they are neither radical nor complete nor even cancer clean.

7. When the condition is discovered and operation is to be done, the patients should be warned against examining, rubbing, injuring, or otherwise irritating growths of any kind. In preparation for operation such regions should not be scrubbed. Cancers treated by osteopaths or anyone else with local massage should usually be left alone.

8. During operation cancerous organs should not be clamped, opened, compressed nor pulled anywhere near the seat of the disease. Operations requiring such traction and clamping as a part of the technic are unsuitable.

9. Cancers in very fat people or in very young patients are less amenable to surgery and this should be considered. A very eminent surgeon once said that in a certain type of cancer in fat women he had operated many and never cured one. The occasion for this remark was that he was then operating such a case. Why did he do it?

With these principles in mind we can classify for working purposes the various cancers met with and we can lay down definite lines of treatment for each, having due regard for the limitations we should recognize.

1. The first class includes the epitheliomata around the eyes, ears, scalp, cheeks, nose and on the backs of the hands and wrists as well as cancer of the fundus of the uterus and the fundus of the bladder.

These are all slow growing, form metastases very late if at all, and if seen early are readily cured by local measures. Probably cutting operations are less favored around the face than are other agents. The X-Ray, radium emanations, caustic pastes, curetting with the application of chemical caustics and the actual cautery are all useful. The treatments must be thorough and given by those who are expert in the particular method used. If the region is such that the actual cautery can be used it is probably the most readily applied. It should be used repeatedly if necessary and after all growth ceases only should plastics be attempted to heal the wound or remove the scar. The X-ray in competent hands has given excellent results in these cases. If the growth is in the uterus or bladder clean excision will do.

In case the bones of the face are invaded or the glands of the neck are enlarged by metastases, radical operation should not often be done.

2. Group two includes growths of those regions which are easily accessible, have definite removable drainage areas and where metastases are prone to occur. This comprises cancers of the breast, the lower lip, the penis, the cecum, the sigmoid and the rectum.

In this group the operation should be as radical as conditions warrant and the lymphatic area should be removed en masse with the primary growth and the intervening tissue if possible, as it usually is. *When there are enlarged glands in this dependent lymphatic area which are definitely demonstrable clinically, radical operation should not be considered.* This is apt to be questioned for most of us will dislike giving up the beautiful radical dissec-

tions we are in the habit of doing in these cases, even when we know at the time that our work will be futile.

3. In the third group are placed cancers of these regions which present more or less unsurmountable surgical difficulties because the drainage areas is removable in part only or not at all, or the region cannot be operated without the forbidding trauma mentioned above.

We would here place cancers of the uterus below the body, the stomach, the base of the bladder, the prostate, the gall bladder, the kidney, the thyroid, the tonsils and the tongue.

In this group it is only in the very earliest stage that clean work can be done and the removal should be limited to that very early stage.

Cancer of the uterus is here the big problem. The Wertheim operation is done properly by a comparatively few men and it should be limited to them. Most of us should only operate cancer of the uterus when it is seen early and limited and local probably. This logically should be done without pulling, compressing, tearing, or otherwise tending to perpetuate the disease by implanting it in the wound or surrounding tissues. If later we want to do hysterectomy we may do so although it is useless if the growth is gone and likewise useless if it is not. When properly burned there is only a remnant of the uterus left and if the cancer is not killed it is too unpromising to justify radical dissections.

If the growth is of considerable duration, extends through the walls of the uterus or the uterus is fixed, no radical operation should be attempted. Simple palliative treatments alone should be advised.

4. Group four takes in those cancers which are located so as to be amenable only to palliative measures and their discussion can be obviously limited to their enumeration; such are cancers of the esophagus, the liver, the lungs, the brain, etc.

What is said here applies to cancer as it is generally treated. In a comparatively few places the cases are more carefully selected and operation is refused unless the prospects of cure are good. We all repeatedly see cases, which we consider too late for a cure, go away and be operated elsewhere. Personally I do not recall an ambulant case that I have refused operation in that did not go away and be operated and I do not recall one which was cured by so doing.

With our surgery limited as outlined above of course some will die who might have been

saved but many, many more will be saved who would have died. It may do some good to the cause to send home to die *unoperated* 100 breast cancers with axillary secondaries but it won't do it any good to send home *after operation* such cases 95% of whom die of cancer and only 5% of whom are cured. How can we do this and expect the people to send more, assuring them that there is a good chance that we will cure them.

TUBERCULOSIS.

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The subject of tuberculosis is a very exhaustive one, and to-day is commanding a great deal of attention, not only from the medical profession, but from the laity, who have at last awakened to the necessity of organization, to combat this dread disease.

A few years ago, if a diagnosis of pulmonary tuberculosis was made, it was as good as signing the death warrant of the patient, but to-day owing to the advance of Medical Science, we believe pulmonary tuberculosis to be one of the most curable of contagious diseases, provided, that an early diagnosis of the case is made. It therefore behooves us as medical men, to see that we do not err in the matter of diagnosis, as the whole future of the patient hinges on our ability or inability to diagnosis the condition in time, so that proper treatment may be instituted, and the disease arrested.

In the short time at my disposal, I will not attempt to enter into a general discussion of diagnosis, immunity, prognosis and treatment, but will confine myself to the matter of pulmonary tuberculosis.

Years before the Great War through which we have just passed was even anticipated, the Surgeon General conceived the idea of organizing a Medical Reserve Corps, upon which he could rely to assist in the organization of a Medical Corps, in the event of war.

When war was declared, the members of the Reserve Corps were ordered to the various cantonments, and training camps, in order that they might become familiar with the duties of Medical Officers, upon whom depended the efficiency of our Military Organization, for in order to have an efficient fighting Organization, it was necessary that our men be as near to physical perfection as was possible.

When the Medical Examiners of the various Draft Boards began the work of examining

these men it was discovered, that a great many men were rejected on account of pulmonary tuberculosis, and owing to the rather hazy instructions sent out, and lack of standardization in the method of examination, a great many men were sent to the various cantonments, who were later rejected by the Special Board of Examiners appointed by the Surgeon General to re-examine all draft men.

It was soon discovered that a great variance of opinion, in regard to the method of examination, and the extent of the lesions, existed, and to overcome this, and standardize the method of examination, the Surgeon General organized a School of Instruction, for Medical Officers who were to have charge of the tuberculosis work in the Army. This School was under the supervision of Col. Bushnell, who had charge of all the tubercular work in the Army.

After receiving the course, these men were sent out to the various cantonments and hospitals, where all the examinations were conducted according to the system as adopted by the Surgeon General's Office.

This standardization of the method of examination, I consider a move in the right direction, as to-day there is more uniformity in the work of tubercular men throughout the country.

I might say here that we had to depend entirely on history, physical findings, sputum examinations, and the X-Ray, in making our diagnosis, as we were not allowed to use Tuberculin, or any of the other tests for tuberculosis.

The first step then in the examination of a patient, is to take a careful history of the case, and in this, we will be surprised how often in cases which show healed lesions, although the patient will declare that they never had tuberculosis, they will give a history of some time in the past, not feeling quite up to the mark, or as they term it run down.

The next step is to strip the patient to the waist, for it is not at all possible to make a satisfactory examination through any clothing.

On inspection, we will note:

- (a) The general appearance of the patient, whether he looks well or ill.
- (b) Whether well nourished, and developed.
- (c) Shape of the chest, whether long, broad, flat or barrel shaped.
- (d) Depressions, prominence of Scapulae, pulsations and any diminution in breathing.

On palpitation we will note:

- (a) Condition of the Cervical Glands.
- (b) Deviation of the Trachea.

- (c) Increased or diminished vocal fremitus.

On percussion we will note:

- (a) The width of the Isthmi.
- (b) The width of the complemental space, and the excursion of the diaphragm.
- (c) Any change in resonance over the whole area.
- (d) Size and location of the heart.

On Auscultation we will note:

- (a) Any changes in voice or breath sounds.
- (b) Presence or absence of Rales, and this is best determined by expiration and cough.

As to the relative value of percussion and auscultation, while some eminent authorities claim a great deal for percussion, I am of the firm opinion, that the average Clinician will illicit much more information from the auscultatory method. Percussion as practiced by many is of very little value, as they use too much force, and as so much of the lung is set in vibration, they are very apt to miss any small lesions.

In order to get the most out of auscultation, it is necessary that the Clinician is sure that his own hearing is acute, and that he is equipped with a stethoscope that fits his ears, so that all extraneous sounds are shut out. It is also necessary that he be able to differentiate the different breath and voice sounds as transmitted to the ear through the chest wall. The ability to detect the presence of, and classify the type of rale heard, is of great importance in the diagnosis of tuberculosis, and this phase of the examination should be given plenty of time as on the presence or absence of rales will depend your diagnosis as to the activity or inactivity of the disease.

Now we must consider that we are in the vast majority of cases dealing with a chronic tuberculosis, for when a case has so far advanced, so that it can be recognized by physical signs, it is no longer in the incipient stage, and should be classed as chronic.

The diagnosis of pulmonary tuberculosis has not been given the consideration that it should have, and I feel that we in the general practice of medicine, have frequently overlooked cases, merely by lack of method, and by giving insufficient time to the individual case. The general practitioner is usually a very busy man, but we owe it to our patient, to either make a thorough examination, or else not attempt it at all, for no doubt many a patient has been unwisely advised by the busy physician, and has lost his chance for recovery, when a little more time, and a more systematic method of examination would have resulted in the detec-

tion of the minute lesion which later proved his undoing.

Some authorities claim that it is negligence to allow a case to advance to the stage of rales and positive sputum, while on the other hand many physicians are of the opinion that the first focus they find by means of physical signs is the initial lesion, therefore the disease is in the incipient stage, and we find many cases being diagnosed as active, which show evidence of extensive fibrosis, and changes in voice and breath sounds, and no evidence of rales, and frequently these patients will be advised to give up work and take the rest cure which they can ill afford, and which is unnecessary, as they have with their own immunity and the kind assistance of nature, already checked the progress of the disease. We frequently find these patients filling up our institutions to the exclusion of those who really need the treatment, but who find it impossible to gain admission to these institutions.

It is therefore important that we be able to differentiate between the healed inactive lesion and the recent active lesion, and it is a debatable question whether we have physical signs which will enable us to diagnose incipient tuberculosis of the upper lobes, before rales are found present.

Study of radiographs by the most advanced Radiologists leads us to believe that the tuberculous process begins (usually in early childhood) at the Hilus, and spreads through the lung as a peribronchial process, often terminating in the deep lung tissue, but in more unfortunate cases reaching the periphery. When this occurs we usually find the surface lesion in the upper lobes, and this may as you will see be merely an extension of the peribronchial condition and not a primary lesion, as it is frequently considered by some Clinicians, but rather a late development.

Guncher claims that breath changes take place before we get any moist sounds from the softening of the focus, but he also describes these same changes when the case has become chronic, therefore we would assume that the majority of cases met in ordinary practice are chronic.

It is usually considered that dullness at the apex, is a late and not an early sign of a pathological change.

Schneider claims that the first signs are to be expected from auscultation and not percussion, while Osler claims that feeble breath sounds are the most characteristic early signs, but in regard to this I would say that feeble

breath sounds are an indication that the breathing is slightly retarded, and this is usually due to adhesions which are in the majority of cases of pleuritic origin. So we have a wide diversity of opinion in regard to the early signs. However, we may have an old lesion with all its characteristic signs, within which there has been a re-activation, and then we have a mixed lesion, which proves rather puzzling to the Clinician.

Col. Bushnell claims that we will never be able to diagnose apical tuberculosis intelligently until we accept the theory that we may have more than one exacerbation in that region, and that the lesion we detect, though minute and obscure, is not an incipient lesion. His theory is that the process in its advance from the deep lung, spills over, so to speak, and then the immunity of the patient rises, and the tide of the disease recedes, the lesion heals, and then we get all our characteristic changes in percussion and voice sounds and these are again frequently mistaken for an active rather than an inactive lesion.

In regard to the matter of determining the nature of the process, by the presence of rales, we must remember that we have crepitant, sub-crepitant and indeterminate rales. The indeterminate rale being as to location of bronchial origin, the sub-crepitant of the bronchiole, and the crepitant of the alveolus. The indeterminate rale we term the rale of chronic tuberculosis, while the crepitant and sub-crepitant differing only in size, and occurring in showers, are easily determined, and are indicative of some pneumonic process.

After making a diagnosis of pulmonary tuberculosis it is important to determine whether the disease is of the advancing or non-advancing type. In the non-advancing type we will have dullness, changes in breath and voice sounds, which will come to a level where we will find a sharply marked line of demarcation, and immediately below this we will have our normal sounds. In the advancing cases we will not have any well defined line of demarcation, but rather a shading from the dull note to the resonant with rales probably extending below the area of dullness and not corresponding with the voice and breath sounds. We may have indeterminate rales over the area of dullness with sub-crepitant rales extending below, which is an indication of a lack of immunity, and in these cases we may have numerous foci of infection, the tubercles either remaining discreet or coalescing and forming a cavity.

I have not said anything about miliary tuberculosis, but we usually find this type in

patients who apparently have no immunity, and we have an overwhelming of the vital forces. At the outset there are usually no physical signs upon which to rely, and the X-Ray first of all gives us no information, but later in the disease we get the negative showing very prettily the extensive mottling, due to the rapid invasion of the disease.

The tubercles in this type are very numerous and are disseminated throughout the whole lung tissue. Rales are usually found before any changes in voice or breath sounds.

In the diagnosis of cavitation it will behoove us to be very conservative as I have seen a diagnosis of cavitation made from an X-Ray plate which had all the appearance of a true cavity, but which was not substantiated by physical findings, and the clinician was rather embarrassed to find on autopsy that the cavity could not be found. What had been taken for a cavity was an annular shadow and was produced by the pleura. Here is where we require the co-operation of the Clinician and the Radiologist as the X-Ray is of incalculable value in the diagnosis of pulmonary tuberculosis. The dependable signs of cavitation are, on percussion we would expect to find a tympanitic note, or cracked pot resonance, on auscultation cavernous breathing and whispered pectoriloquy; but we must also remember that it makes a difference whether or not the cavity is empty or whether it is full of mucus, as the signs of a full cavity are apt to be misleading. We must also remember that we may have a displaced heart, which would be so situated as to obliterate the lumen of the cavity and there is where it is very important that the clinician percuss out the heart area, before he proceeds with auscultation.

While I have not time in this paper to go farther into the matter of diagnosis I would like to call your attention to a very important point, and that is the rapid pulse, which invariably is associated with an active lesion, and also another characteristic point which is low blood pressure as we frequently find a systolic pressure of 95 to 110, and a diastolic of 60 to 70.

In conclusion I want to emphasize this—familiarize yourself with the normal as well as the abnormal sounds to be heard in the chest, systematize your method of examination and remember that you owe it to your patient to give him sufficient time to make a thorough examination, and in this way we will be able to do more uniform chest work, and the results will not only be beneficial to the patient, but will also be very gratifying to us as clinicians.

DIAGNOSIS AND TREATMENT OF PERIPHERAL NERVE INJURIES.

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The experience of the war has taught us much in the field of peripheral nerve surgery. The great numbers of nerve injuries gave opportunity for study, and experiment, and accurate observation which was unobtainable under peace conditions. These opportunities have not been wasted. As we gradually acquire a perspective on the nerve work of the war and get time to arrange and observe its final results, we realize that much that was theory before the war is now proved fact, and much that was simple tradition and guesswork has been disproven, and discarded. The lessons we have learned must not be wasted, but must be applied to the comparatively rare nerve injuries of industry and civil life. Not one of them should be allowed to escape without proper treatment, either through the common fault of failure in diagnosis or through ignorance of what can be done for them. It is doubtful whether men will have enough cases to enable them to develop the standards of technic which produce the best results at operation, but all of us can learn to recognize them and institute proper preliminary treatment. Untreated, many nerve lesions incapacitate; well treated very few do.

Lesions of peripheral nerve trunks are of several sorts. On the sort of injury depend the symptoms, signs and prognosis.

The commonest type is contusion of greater or less extent. We are all familiar with the sensory disturbances and temporary paresis following a blow over the ulnar nerve at the elbow. These disturbances are due to sudden compression or concussion of the nerve bundles with temporary loss of conductivity. More severe contusion causes hemorrhage within or without the nerve sheath with edema and more prolonged loss of conductivity. External contusion may be so severe as to rupture one or more of the bundles of neuro-fibrillae. On the severity of the contusion depend the severity and duration of the paresis. Simple contusion without rupture or the formation of scar tissue always recovers without operative interference.

The next most common type of injury is contusion plus injury to the surrounding parts. This is very often seen in fractures of the humerus with contusion of the musculo-spiral in its groove or in lacerated wounds of the arm. In both these examples the immediate paresis

is caused by the contusion of the nerve which tends to get well. Recovery is delayed and sometimes prevented in such cases by the pressure of scar tissue in the surrounding structures, callus in the humerus and connective tissue in the soft parts. This external pressure of scar tissue of one or the other sort prevents conductivity of the nerve fibres just as does scar tissue from hemorrhage or tearing within the nerve sheath itself.

The third class of injuries is that in which the nerve trunk is actually severed by cutting or crushing injuries. These never recover without surgical interference, in spite of reports which seem to prove that gaps are sometimes spontaneously bridged.

Diagnosis of the type of injury which has been sustained, unless the nerve is actually seen in the wound, can be made only after the most careful study. It demands a very accurate anatomical knowledge, accurate observation and a knowledge of the use of both the faradic and galvanic currents for testing purposes. On the other hand, the diagnosis of the presence of a nerve lesion demands only a moderate knowledge of anatomy and that we should always be on the lookout for it. The existence of a nerve lesion is most often missed simply because we forget its possibility. In both the diagnosis and treatment of all peripheral nerve lesions it is fundamentally necessary that we should add something to the store of anatomical knowledge which remains to us from that very moderate amount which most of us acquired in the medical school. Many of us who worked overseas were deeply chagrined at our ignorance of this basic subject when we compared ourselves with the average English or French Surgeon. Many of us delved deep in our Grays while abroad in an attempt to repair this deficiency. Anatomy then is absolutely necessary in any contact with nerve lesions. We need it first to tell us what nerve trunks can possibly have been damaged in any wound. We need it second in the search for paralyzed muscles and to give us the connection between these muscles and the injured nerve trunk. We need it to tell us in high partial injuries what nerve roots are involved, and we need it finally to tell us what nerves supply sensation to the various parts of the body. Sensory tests however are of comparatively little importance, because they are difficult to make accurately, are largely dependent on psychology, because the distribution of sensory fibres is not constant, and because the fields which the different nerves supply overlap to varying degrees. They are, however,

valuable in the finer degrees of diagnosis, and in the tracing of beginning recovery. Our chief reliance for the usual diagnosis of nerve injury must be placed on motor tests. That is, we must discover what muscles are paralyzed either in voluntary power or to the faradic current, and then be able to connect this paralysis with the proper nerve or part of a nerve.

It may be well at this point to indicate a few of the most important motor supplies in order to emphasize my point in regard to anatomical knowledge. All the extensors of the hand and wrist are supplied by the musculo-spiral before its division or by its posterior interosseous branch. Its radial branch has no motor supply. All the flexors of the hand and wrist except the flexor carpi-ulnaris are supplied by the median. The flexor carpi-ulnaris and all the intrinsic muscles of the hand except the abductor, opponens and outer head of the flexor brevis pollicis are supplied by the ulnar. In the upper arm the triceps is supplied by the musculo-spiral. In the leg and foot all the dorsi-flexors are supplied by the external popliteal branch of the sciatic thru the anterior tibial, and all the plantar flexors and intrinsic by the internal popliteal thru the posterior interosseous. If these few facts are kept in mind gross lesions of peripheral nerves will be easily recognized.

The type of injury and the prognosis are much more difficult matters. Complete paralysis of a group of muscles following an injury does not necessarily mean that the corresponding nerve is severed. In fact unless the nerve has actually been seen lying cut in the wound or unless the wound is of such a character, as for instance a penetrating knife wound, as to make its cutting practically certain, the probability is that the nerve is not severed. Therefore in most cases we must watch for a time. Simple contusions will recover spontaneously in a few days or weeks. More severe contusions with hemorrhage or scar tissue will often recover in a few months. Complete division will never recover. It is in determining which we have to deal with that electric stimulation becomes of such great value. Muscles supplied by a damaged nerve may immediately lose voluntary power without losing their response to faradic stimulation through the skin. This is always true at first even when the nerve is completely severed. After a few days or weeks this response to faradism disappears whenever the conductivity of the nerve is completely lost either from severance or pressure. Muscles which have lost their innervation for a considerable period of time lose their normal response

to galvanism and undergo the so-called "reaction of degeneration"—that is they respond slowly and sluggishly or not at all even to heavy galvanic currents. Sensory changes too bear a close relation to the degree of nerve damage. As we said above, however, the observation of those changes is difficult. In general it is as follows: In a moderate degree of nerve injury the superficial sense of light touch is lost. In more severe degrees the pain sense is lost. In long-continued complete lesions even the deep pressure or bone sense disappears. It is then from a careful correlation of the voluntary motor changes, the motor electrical reactions, and the sensory changes that we make a final diagnosis of partial or complete lesions of the nerves. I believe such a diagnosis cannot be made short of three months, and it cannot always be made at all. When, however, a diagnosis of a complete lesion is made, it is by no means possible to be sure whether this lesion is a complete cutting of the nerve or merely a sign of pressure from damage within or without the nerve, that is whether it is anatomical or physiological.

The prognosis on any given case can be made only on the same careful study that has been outlined in diagnosis. In general, contusions of all degrees unless complicated by extra-neural pressure will recover if left to themselves. The period of recovery depends on the distance from the seat of injury to the distribution, on the complication of the distribution, and on the degree of injury. Spontaneous recovery may occur in a few hours; it may require two or three years. Even severe degrees of crushing and external pressure have in my own experience, been overcome and the nerves have spontaneously recovered. Spontaneous recovery can be watched and checked by observation of the signs used in diagnosis. Generally they reappear in the reverse order of their disappearance. During recovery the so-called sign of founillement or Tynnel's sign is of some use. This sign depends on the supposition that new nerve fibres are poorly covered, and are therefore sensitive. If the course of a nerve is gently tapped below the seat of injury a stinging sensation is felt in its distribution as long as the tapping does not go beyond the limits of growth of the new fibres.

The treatment, other than surgical, of nerve lesions is of great importance. It is of two sorts. First that which favors nerve growth. This consists entirely of local treatment in the neighborhood of the wound to improve circulation in the scar to soften scar tissue, and to

prevent its formation. In soft part lesions heat and gentle massage are of most importance. In bone lesions, careful and prolonged fixation tend to keep down the size of the callus. Electricity or other stimulating agents applied over the seat of the lesion probably have no effect on the growing fibres. Second, that which has as its object the maintenance of tone and nutrition in the paralyzed part. Massage and passive motion do this to some extent. Active motion of the unparalyzed surrounding muscles is most helpful. Faradic stimulation in moderate and carefully regulated doses for muscles which will respond to this form of electricity is useful in preventing degenerative changes. Where there is no response to faradism, galvanism should be used, but most carefully to avoid muscle exhaustion. Proper splinting is essential. This does not mean rigid constant splinting, such as the stiff metal "cockup" splint which holds the fingers and wrist extended in musculo-spiral paralysis, but some form of elastic or flexible splint, which allows the opponents of the paralyzed muscles to work, but does not allow the paralyzed ones to be over-stretched. It is undoubtedly true that rigid splinting does delay recovery by causing fixed deformities in corrected positions, and by interfering with nutrition. Flexible splinting, however, prevents fixed deformity and allows active motion of the paralyzed muscles as soon as they begin to recover. Flexible splints in conjunction with daily use through some form of work in the hand and arm, and with walking in the foot and leg gives the most favorable conditions for reinnervation, as the nerve recovers. I am sure, however, that even rigid splinting in corrected position gives better opportunity for ultimate recovery than does use in the position of deformity. I have seen many cases of external popliteal paralysis in which tests proved that the nerve had recovered, and yet there was no voluntary power in the dorsiflexors of the foot because the patient had been allowed to acquire a rigid foot drop, and thus to overstretch and exhaust the dorsal muscles.

If at the end of two or three months a diagnosis of complete or nearly complete paralysis has been confirmed by repeated examinations, and there are no signs of beginning recovery, my conviction is that exploratory operation should be undertaken. Earlier than this, nerve operation is unwise unless suture of a cut nerve is done at the time of injury or unless it is absolutely certain that the nerve is cut. The reasons for this delay are the danger of lighting up old sepsis, the danger of unnecessary scar tissue formation, and the danger of fur-

ther traumatism to a nerve which might otherwise recover spontaneously.

Before operating on any nerve case, the surgeon should be provided with an apparatus capable of producing a mild faradic current, one pole of which is attached to a fine electrode which can be sterilized. This is absolutely necessary if proper work is to be done, for the reason that sometimes nerves which on external examination have shown no sign of continuity, will, when directly stimulated at operation, show some conductivity, and thereby prove that they are not anatomically severed. To do an end to end suture of such a nerve merely delays recovery. It is extraordinary to see at operation how badly a nerve can be scarred and crushed and yet conduct impulses. This apparatus also makes it possible to save uninjured tracts and to suture only the destroyed ones.

Exploratory operation may be very simple or very difficult, depending entirely on the amount of scar in the surrounding tissues. It is always important to make incisions that are plenty long enough. One must not be handicapped for lack of space. The nerve should always be approached at some distance above and below the injured portion. This gives the advantage of coming down on normal nerve which can easily be isolated. When it is found above and below, the surgeon can work toward the injury without fear of further damage. Observance of this rule does more to simplify nerve surgery than any one other thing. There need be no fear of isolating considerable stretches of normal nerve as the work of Huber and others and general experiences prove that it does no harm. The nerve once found should be handled with the greatest care. My own experience is that less traumatism is done nerves by gentle handling with fine toothed forceps than with smooth ones. Tooth forceps make it possible to seize only the sheath without pinching the nerve itself.

When the injured portion is finally isolated the next step depends on the condition found. If there is evidently a complete separation of all the fibres, two nerve bulbs will appear, the proximal large and rounded consisting of interlaced growing fibrillae and scar tissue; the lower small and wholly made up of scar tissue. In this condition an end to end suture must of course be done. The bulbs must first both be cut back to normal nerve fibres, although it is probably necessary to go back of all the scar surrounding the bulb. This cutting back is best done with a very sharp scalpel in successive thin sections, the nerve being fixed with

mosquito forceps meanwhile. When good nerve is finally reached there remains a more or less considerable gap to be bridged in order to get end to end approximation which must be done without tension. This can be done in various ways. First by freezing the nerve from its bed for a long distance above and below, length can be gained. Second, by manipulation of the adjacent joints in flexion or extension relative length is obtained. Third, by transplantation as in the case of the ulna from the back to the front of the condyle. If all these methods combined do not succeed, then a graft must be done. There is still much discussion of the best method of grafting, but probably the so-called "cable" autogenous graft of Elsberg is the best. In suturing the nerve, I prefer to use fine black vaseline silk with very fine round curved needles. The important point in suturing is, I am sure, the placing of the stitches in the sheath only. Transfixion stitches of any sort should be avoided. The accurate approximation of each bundle of fibres to its proper mate is ideal, but in the present state of our knowledge and technic is impossible. Care must be exercised, however, to prevent rotation and to make a neat, absolutely end to end joint. In the smaller nerves four sutures will usually do this. In the larger more are needed.

After the suture is complete, various methods to protect it, such as fat and fascia transplants, various sorts of tubes, Cargile membrane have been tried. It is probable that all these defeat their own purpose by increasing scar tissue. A groove in healthy muscle in which the bleeding has completely stopped is the best bed for a sutured nerve.

If on exploration the nerve is found to be crushed but not completely separated, then direct electrical stimulation may reveal some conductivity. If so the nerve must be left to itself. If it is continuous but badly crushed and does not transmit stimuli, then only experience can tell whether it should be freed and cleared of scar tissue (eurolysis) or whether it should be resected and sutured.

Sometimes complete loss of function is dependent simply on firm fibrous bands. The freeing of these gives the best results of all nerve operations.

In badly scarred cases or in those where there has been much sepsis, all nerve sutures should be done in two sittings, the first a simple exploration to expose the whole field of operation. This wound is closed, and recrudescence of sepsis watched for. If it does recur there need be no hesitation about opening the wound

for drainage, whereas if the suture has been done at the first sitting, and sepsis appears one hesitates to drain freely and the suture is usually lost. If no sepsis appears, at the end of ten days the wound is re-opened and the suture done.

Under proper treatment many injured nerves recover without operation.

Care, skill and knowledge are necessary in making a diagnosis and advising treatment.

Nerve suture is followed by recovery in at least 60% of the cases regardless of the time element.

Nerve recovery is a very slow process.

Nerve suture or exploration should always be attempted.

Operations such as tendon transplantation are sometimes successful in compensating part of the disability of nerve lesions, but they should never be done until sufficient time has elapsed to insure that nerve recovery is impossible.

A FEW POINTS OF INTEREST IN A CASE OF AORTIC ANEURISM. CASE REPORT.

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Case No. A-643, an American, male, country hotel keeper, aged 45, entered with a complaint of a "slight pain in the chest, with occasional shortness of breath."

Family History: Negative as to similar conditions, carcinoma or tuberculosis. He had been married over twenty-five years. His wife had had no pregnancies.

His former health had been good, with no history of operations or injuries.

Previous Diseases: The patient had diphtheria thirty-four years ago. Twenty-seven years ago he had an attack of gonorrhea. He gave a history of having had a small "soft chancre" on the penis twenty-five years ago. This lesion lasted but four days. No treatments were taken at the time.

Habits: Coffee 1 cup, tea 2 cups, cigars 3 to 4 daily.

Present Illness: While loading hay in a field one day this past summer, he had to stop work because of a pain in the chest. It lasted but a short time. The pain had been present more or less since then, however. It gave him more trouble in damp weather.

There was nothing remarkable in his urinary history except his having to urinate once at night. There was no delay in starting the stream, and no dribbling.

Recently he had had periods of jaundice that made their appearance about four times a year. These always followed the use of whiskey, which he said he never used excessively.

PHYSICAL EXAMINATION.

General Appearance: The patient looked well and robust. His height was five feet ten inches; weight one hundred ninety-six pounds.

Scalp: Negative.

The eyes showed nothing abnormal. The pupils reacted well to light and accommodation.

Teeth: A very severe degree of pyorrhea existed, together with a loose bridge which harbored a very disagreeable odor.

His tonsils were moderately enlarged; the throat showed a moderate degree of pharyngitis.

The submaxillary glands presented a marked degree of firmness. On either side they were about one inch in length and movable.

Heart: A diastolic murmur was heard over the second interspace at the right sternal border. It was also audible three inches left of the mid-sternal line over the fourth interspace. A blowing systolic murmur could be heard along the left side of the neck.

Pulse: The pulse at the right wrist was of the pistol shot type. The right pulse was also greater in volume than the left. It was felt sooner in the right radial than in the left with each cardiac impulse. There was visible pulsation in the finger nails which could be noticed more easily on the right. The pulse rate was 80.

The blood pressure was as follows:

| | Systolic | Diastolic |
|------------|----------|-----------|
| Right side | 142 | 110 |
| Left side | 108 | 70 |

The lungs presented normal physical signs.

Abdomen: There were signs of a mild degree of ascites. A small succussion wave could be elicited. There was present slight capillary engorgement at the umbilicus.

Extremities: Varicose veins were well marked in both legs as follows:

On the left: Enlarged upper segment of internal sphenous vein; the internal sphenous at the knee; the inner and posterior surfaces of the calf of the leg.

On the right: Enlarged upper segment of the internal sphenous; anterior, posterior and inner surfaces of the calf.

Rectal examination elicited a moderately enlarged, hard prostate. There was also a scar of a previous fistula in ano.

The skin showed no pathology, except for two small papillomata, one on the back, the other on the left aspect of the abdomen.

The patellar reflexes were both normal. Romberg's sign was negative.

Resumé on the day of examination was set down as follows: Aortic and mitral insufficiency; aneurism or dilated aortic arch probably due to syphilis; foci in teeth.

LABORATORY REPORTS.

Dental x-ray showed abscesses at the roots of the following teeth: lower left first molar, lower right and left lateral incisors and the lower left cuspid.

X-ray of the chest showed the following:

The diaphragm was two inches too high on the right. The heart was enlarged one and a half inches to the left. There was a moderate

sized aneurism of the transverse arch of the aorta which apparently extended downward into the beginning portion of the descending aorta. The plate also suggested passive congestion of the mediastinum.

The urine showed nothing remarkable. The blood showed nothing interesting except a leucocyte count of 6350. The hemoglobin was 95%.

The Wassermann test gave the following report:

| | |
|---------------------------|--------------|
| Acetone Insoluble Antigen | Negative. |
| Cholesterinized Antigen | Positive++++ |

Treatment: The infected teeth were extracted with the exception of the upper anteriors which were considered amenable to treatment. Thus far three injections of salvarsan have been given.

Results: The patient's previous complaint of pain in the chest and occasional shortness of breath is constantly diminishing. He states that he feels much better.

DISCUSSION.

The purpose in presenting this case is three-fold. First, because it exhibits such a marked contrast between the mildness of the symptoms and the abundance of pathological findings. Secondly, because it illustrates the value of a careful general examination. Thirdly, because it shows the advantage of always bearing in mind the possibility of syphilis.

We have here a man whose only symptom was "slight pain in the chest with an occasional shortness of breath." His general appearance, in fact, would not indicate that any serious condition existed. Yet, after a complete examination we found definite signs of pathology.

This should at once illustrate the value of a careful general examination. And what do we mean by a careful general examination? We mean simply this, that if in the regular general examination any one particular condition is suggested we should carry it out further, in detail, as it were. For example, in all routine examinations, the pulse should be observed at both wrists. In this case it was observed that the two pulses differed in volume, and that on one side it appeared before it did on the other. It at once should suggest the recording of blood pressure in both arms, and, as might be expected there was a decided difference in the pressure in both arms. This is an important sign which points toward aneurism. It was first observed by O. K. Williamson (1). He states that if the blood-pressures of the two arms vary more than 20 mm. Hg, it favors aneurism.

Personally, I believe the blood-pressure should be taken bilaterally in all cases presenting cardio-vascular symptoms. I have not mentioned "tracheal tugging" which was pres-

ent in this case, because, as shown by Toulmin (2), it may be present in health and in other diseases; hence, it is of little value.

Furthermore, it shows the advantage of always bearing in mind the possibility of syphilis. As I have mentioned before in a previous article (3), "that in any case with a history of a venereal lesion, syphilis is to be ruled out with caution before a diagnosis is made."

The venereal history in this particular case was valuable. Twenty-seven years ago he had gonorrhea, which in itself does not mean much, but very often this is the only disease of which we can obtain a history in cases which later turn out to be syphilis. I am beginning to believe that chancres occur within the urethra, associated with gonorrhea, more often than we have previously realized.

The most important fact in this venereal history was the occurrence of a sore twenty-five years ago, which the patient called a "soft chancre." It lasted but four days. We must remember that twenty-five years ago the differentiation between chancres and chancroids was merely a matter of guess-work. Neither the knowledge of the *spirocheta pallida* nor the aid of the Wassermann test was known. Therefore this sort of history should at once arouse the suspicion of the possibility of syphilis.

CONCLUSION.

This case brings out a few things to bear in mind. First, we should not depend too much upon a venereal history. If it is negative, or nearly negative, the value should be compared with that of a negative Wassermann—it really doesn't mean much. Patients will nearly always under-rate the severity of their previous lesion, but if they will admit the history of any kind of a venereal sore, syphilis must at once be very carefully considered.

Secondly, after we have diagnosed the condition, a part of the treatment should consist in removing any possible foci of infection particularly as a prophylactic measure against mercurial nephritis.

The third point of interest here is the importance of observing the blood-pressure bilaterally. This case illustrates how important a procedure it is in cases presenting cardio-vascular symptoms.

The last point to consider covers the treatment and prognosis. The condition here is of long-standing origin, but the active lesions are not so far advanced that they should be considered beyond treatment. If we can arrest the progress of the condition as it now exists,

together with relieving his symptoms, we have done a lot in the way of benefit for the all-important individual, the patient.

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CONGENITAL HARELIP AND CLEFT PALATE.*

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Congenital harelip and cleft palate is unquestionably one of the most hideous deformities known to the human race. Early in the second century, Galen knew it to occur among his people, and described it as "lagocheilos," meaning, "lip like a hare."

These afflicted children are a source of great mental anguish and humiliation to the parents, and as the child begins to appreciate his deformity, his embarrassment is often so great that his mental development is retarded.



FIG. I. Child referred to in text as first child born of second marriage—father having double hare lip.

He shuns society and is often held back in his school work because of his difficulty in making himself understood. Therefore it is essential

*Read before the Calhoun County Medical Society, Thursday evening, November 4, 1919.

that these children be operated on at an early age, not only to save the child's life, for many of them die of malnutrition within the first few months—but also to save the parents from humiliation and enable the child to develop normally.



Fig. II. Note nose diverted from mid-line. Abnormally large nostril on affected side. Complete hare-lip and C. P. Children should never be allowed to go until this age uncorrected.

EMBRYOLOGY.

The normal lip and palate are formed by the union of certain processes during the first few weeks of embryonic life. You will remember that at about the fourteenth day the mouth is represented by a depression between the head and pericardium. This primitive oral cavity has no lateral boundaries, but these appear later and the space so formed eventually becomes the upper part of the mouth and nasal cavities, the floor of the mouth and tongue being developed from the pharyngeal portion of the foregut.

At about the third week the mandibular arches are formed on either side. These grow forward and eventually unite in the midline, forming the lateral and lower boundary of the

oral cavity. At the third week, the maxillary process buds out from the mandibular arch, and from above another process, the naso-frontal, grows downward. On each side of this process

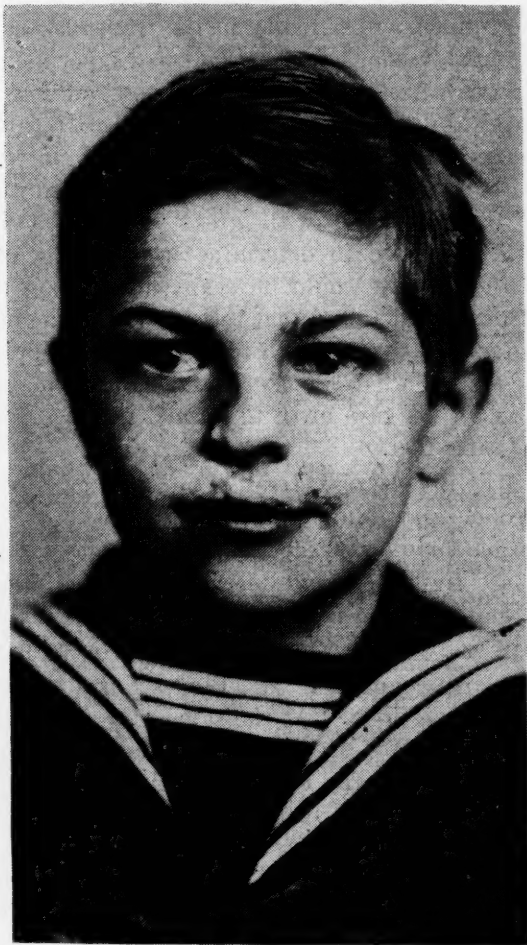


FIG. III. Same boy. Picture taken day stitches were removed from lip.

there is a slight depression—the olfactory pit, which later becomes the nostril.

About the sixth week the parts forming the lip unite. The lateral nasal process unites with the maxillary process, and the naso-frontal process becomes fused at each side with the maxillary process so, by the eighth week, the lip should be completely formed.

The palate is next formed by the union of lateral processes uniting first at the front with the pre-maxillary process, then fusing in the mid-line, till there is a union to the tip of the uvula. This, then, divides the primitive oral cavity into two parts, the oral and the nasal cavities, and the process should be completed by the tenth week.

From this brief description of the embryology, it will be seen that all children have a cleft palate up to the eighth week of intra-

uterine life, and the child, born with a cleft palate, simply represents the result of a failure of union of the parts which compose the palate and lips. As Brophy states—"At birth, a cleft palate, with rare exceptions, has in it sufficient tissue to form a normal palate; the abnormality is only a separation of well developed parts."

It is particularly interesting to theorize at least as to the possible causes of this deformity, for any factor which interferes with the closure of the cleft may be the cause of a cleft palate.

ETIOLOGY.

The Etiology of Cleft Palate is, as yet, very obscure. Many theories have been suggested as to the predisposing and active causes but, as yet, no one factor has been found responsible in all cases. Uterine inflammations, venereal diseases, maternal impressions, defective nutri-



FIG IV. Operated in infancy leaving notched lip, as shown.

tion during the early weeks of pregnancy, supernumerary teeth, toxic influences, such as alcohol, lues, etc., have all been considered responsible by certain authors, but, at present,

the hereditary factor is believed to play a more important role than any of the others given.

In 1899, Prof. Warnekros, first published an article in which he noted the frequent occurrence of supernumerary teeth in cleft palates. Since then he has done considerable work



FIG. V. After notch was removed.

on this subject, and now claims that all cleft palates are caused by a supernumerary tooth bud. It is a fact that, in many families, where there is a cleft palate trait there is often a history of irregularities in the tooth formation in the lateral incisor region. However, it is difficult to believe that this cause is always present because we so frequently see harelips which are not associated with cleft palates, and the two conditions are, in all probability, caused by the same thing.

Dr. A. O. Strauss, of the Berlin Zoological Gardens, reported in 1913, that thirty jaguars, born of one mother, by the same sire, within one year, had cleft palates, and all died. The parent animals had been fed cold meat, from which the blood had all been extracted. Later, the diet was changed and they were fed meat which was still warm and contained blood; upon that diet, not one cleft palate occurred in

two litters, in one year, about twenty-one jaguars. (Brophy's Surgery.)

For several years, Mr. Wm. F. Blades carried on a research work in connection with the Eugenics Record office, attempting to determine the influence of heredity in the transmission of cleft palate and harelip. In these experiments, he used affected families of Boston bulldogs, a breed of dogs in which harelip and cleft palate occurs quite frequently. He found in this work on dogs that the trait was transmitted to the offspring, with great regularity. He also attempted to determine whether the diet of the parents would have any effect upon the offspring, but found that the dogs, with the hereditary trait, gave birth to cleft palate puppies, no matter what food was given to them, and the controls gave birth to normal puppies upon the same diet.

Mr. Blades also treated normal dogs with alcohol and found that they gave birth to normal puppies, except where there was a cleft palate trait. It would seem from these observations that, the factor of nutritions and toxins, such as alcohol, seems to play little or no part.

In this connection, Mr. Blades raises the following question: "At the same time, when the lip and palate are developing, are there not other parts of the embryo developing, and, if nutritional disturbances arrest the development of the lip and palate, would we not expect to find other evidences of arrested development, resulting in some other deformity, which should almost invariably accompany harelip and cleft palate?" In their records covering thousands of cases, they find no constant association between this and any other deformity.

The work of the Eugenics Record office is not yet completed, so they are unable to draw any definite conclusions; but Dr. Davenport, the director of the Institute informs me that, from their observation, heredity seems to be the most important factor.

The influence of heredity is well illustrated when we consider the occurrence of cleft palate, on a small sparsely populated island, off the coast of Maine. One of Eugenics Record office workers has spent eighteen months looking up family histories on this island, and a record through seven generations of some families shows a remarkable percentage of cleft palate and harelip cases. There are only a few family names represented on this island, and, practically, all marriages are between cousins, and, due to heredity and this inter-marrying, hare-

lip and cleft palate, in some form, is represented in nearly every family.

I wish to cite a case in my own experience.

A normal woman was married at fourteen years, to a normal man, there being no history of cleft palate nor harelip in either family, so far as is known. There were five children by this marriage, all physically perfect. She was married a second time to a man having a double harelip and who also had a brother with a single harelip and cleft palate. The first child, by this second marriage, was born with a double cleft palate and harelip. This seems to show that heredity is the most important factor.

FREQUENCY OF CLEFT PALATE.

Accurate birth statistics, in regard to the frequency of cleft palate births, are very hard to obtain. It is certain they are of more frequent occurrence than is generally thought. The latest statistics available are those compiled by the Surgeon General's office, showing the number of men examined by local boards for the draft. These statistics are based on the first two and one half million men examined.

The total number of harelips recorded is 283. This probably includes some unoperative cases, and some with unsightly scars, with no record made of the usual harelip scars.

The number of cleft palates recorded is 1183, or about one in thirteen hundred. The city rate for cleft palate is about 0.36 per thousand, and the rural rate is 0.47 per thousand. The city rate for harelip is 0.06 per thousand and the rural rate 0.13 per thousand, so the rural rate appears to be about 50 per cent. greater than the city rate.

For both harelip and cleft palate, the ratio slightly exceeds one in 2000. We must remember that these are only men over 21 years of age, so the number born with cleft palate must be considerably larger, for the mortality of cleft palate babies, if left unoperated, is about 30 to 40 per cent.

According to states, the number of cleft palates and harelips varies, the greatest percentage being found in Vermont and Maine, where there is about one in seven hundred fifty; while in Michigan, the proportion is about one to 2,000.

TREATMENT.

The correct treatment for complete Cleft Palate and Harelip has been a subject of much controversy for years. Children are usually poor operative risks, in any event, and many

cases have been lost through excessive eagerness or impatience, on the part of the operator. These children should not be operated until they are physically fit for an operation. They should all be examined by a pediatrician and operation postponed until he reports that they



FIG. VII. Same after operation.

are gaining in weight, have normal stools, and a clear chest. If this rule is followed invariably, the post operative mortality will be considerably lessened.

The best age at which to operate has been a subject in dispute for years but, at present, most men agree that, in case of complete harelip and cleft palate the first operation should always be bone surgery and the operation should always be done as early as conditions will permit, from the first 24 hours to three months of age at the latest. The surgeon should treat this condition exactly as he would an ununited fracture. The ends of the bone should be freshened and the interposing tissue removed, then the two freshened ends of the bone wired together, so that a firm bony union results. In the case of double clefts, with a protruding pre-maxillary bone, this pre-maxillary bone should never be cut off, for such a mistake leaves an almost irreparable deformity. This bone should

be placed in its normal position, the approximating edges freshened so that bony surfaces are in contact and wires introduced which will hold the part in position till a firm bony union is established.

The lip operation should be done second. When there is only slight cleft of the alveolus, and only one wire needed, some men do both the lip and the alveolus at one time, but usually, in the case of wide clefts, it is better to do the bone operation first, and the lip about five or six weeks later.

The third operation, that of closing the soft palate, should be done just before the child begins to speak; usually about the fourteenth or sixteenth month, so that the child can be taught, from the beginning to speak correctly.

The Post Operative care is usually greatly neglected. It would be fruitless to simply close over a cleft palate and expect a marvelous change in the speech. It takes months of careful work with a vocal teacher to obtain correct co-ordination of the organs of speech, if the patient has already learned to speak with a cleft palate accent, but wonderful results are

obtained by careful, conscientious work. Only last winter I saw a man, 33 years of age, a major in the army, who had been operated at 26 years of age. Up to this time, his speech had been almost unintelligible, but, after nine months of careful work with an elocution teacher, his speech was perfect, and remained so.

It is impossible to outline all the steps in these operations in detail, for one can not get the small points in technic without continually observing and assisting in these operations; but I shall try to give you the technic in general for the repair of these defects, and point out some of the many mistakes that have been made in the past which should be avoided in the light of present day surgery.

In conclusion I wish to publically pay my tribute to my friend and teacher, Dr. Truman W. Brophy, for his many kindnesses extended to me. I think he has done more to establish a logical method of treatment in these cases than any other man.

(Lantern slide demonstration of operative procedures.)

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Editorials

MOLECULE VS. ATOM OR THE TOXINE OF ISOLATION.

This is an age of union-union, translated into terms of greater purpose, efficiency and strength. The end results of union has not in view solely a policy of aggressiveness, but in large measure the policy of conservation and defense. Today union surrounds and permeates every activity of human endeavor, and is especially emphasized; developed and organized at this our most important and critical period of political and economic existence—a period almost exclusively occupied in propaganda of reconstructive ideals and measures. It is a battle for existence equally as well as for a drive for a "place in the sun," wherein group activity will succeed and single endeavor count as naught. It is a fight of the molecule versus the atom, of group activity versus single existence. Whether these molecules of human activity are represented in combinations of finance, labor, business, agriculture or the professions, the union or combining force of one or the other of these factors of endeavor will hold its own particular status in this reconstructive world

in an exact ratio of its effective union and molecular activity.

The Wayne County Medical Society having an appreciation of the conditions confronting the profession of medicine today, and in the near future; and also having in view the absolute requirement of an unionized profession (not for "strikes," but for defense, preservation and efficiency) to meet such present and changing conditions, has arranged for a membership drive, with the object of securing one hundred percentage of eligible membership in the county. For the purposes of the drive the county and city have been divided into several districts, and these districts will be thoroughly canvassed by the membership committee, of which Dr. Howard Pearce is the Chairman.

The Wayne County Society offers the following ideal membership advantages: An up-to-date clubhouse home, conveniently situated in the heart of the business section of Detroit; a present membership, including a very large per cent. of the leading practitioners of the city and county; a large, modern and nearly perfect auditorium for general and sectional meetings and for entertainments; a well stocked and selected reference library, including the leading medical journals published in this country; an efficient and up-to-date clinical laboratory in charge of experts; weekly meetings for the presentation of original papers, exhibition of cases, etc., including frequent addresses by nationally known members of the profession, covering the several medical specialties; a well managed and successful medical defense organization; and last, but not least, a moderate priced and much patronized cafe service.

The social side of club life is a prominent feature of the county society's activity, promoting as it does acquaintance, goodfellowship and a spirit of professional tolerance and good will among members, which markedly shows itself in the daily routine of professional visits and consultations.

Scripture says, "It is not good for man to dwell alone," and it should have added, neither is it proper for a physician to deny himself to the brethren, for behold, in time he perishes in the toxins of his isolation, and no patient knoweth him," (except as a "back number," qualified for the "discard.")

Membership in a county society qualifies a physician for membership in the State and National Associations. These three units of an ideal unionized profession should be so strengthened this year that they may successfully meet conditions sure to arise in the very

near future, and which will, if not strenuously opposed, constitute a menace to the profession as a whole, and personally to the physician himself, affecting his status as a professional man, and as a citizen of repute and influence in the community.

It, therefore, seems an absolute necessity in this period of change and reconstruction for every reputable registered physician in the State, if a member of his county society, to constitute himself or herself a committee of one, and impress upon those practitioners eligible for membership, the immediate urgency of a 100 per cent organized profession, and the personal benefit derived from membership with the County Unit. Let every physician in the State translate his present nascent atomic professional status into a condition of molecular activity, the watchword being, Altogether—Now.

Contributed.

COMPULSORY HEALTH INSURANCE.

Compulsory Health Insurance was born in Germany. Its father was Otto, Prince von Bismarck, and its mother was Political Necessity. The Iron Chancellor knew his Germany. He had no fear of the upper classes. Selfish interests would keep them in line. He had no fear of the middle classes. A long drawn out title and paternalistic interest in their business, would satisfy them. But when he came to the submerged class, that was the problem to make even Otto, Prince von Bismarck walk the floor. Here was a class who had to eke out existence on beggarly wages. Their hours of toil were long and with the utmost frugality, they could scarcely keep two jumps ahead of hunger. The question with Bismarck was how to knit this class to the State; how to get the warp and woof of their daily lives so interwoven in the fabric of the Government that the downfall of the State meant utter ruin to them; how to give as little as possible and yet keep the working people contented and satisfied.

No one knew better than Otto, Prince von Bismarck that to talk of the glories of the Fatherland to a man who has never known the joy and satisfaction of a full stomach is not conducive to great results. But, if he could show that man that, if he would unquestioningly obey those above him; if he would toil for long hours and short pay; if he could be made to save something out of his pittance, a loving government would see that he had medical attention, if the man were sick; if unemployed, he would be paid a part of his daily

wage; that his children, particularly boys, potential soldiers, would be looked after; that if the man died, he would be given decent burial, then the Iron Chancellor felt that the problem would be solved. But all of this would mean money and the State had no money to spare. So Otto, Prince von Bismarck discovered that the only way to do was to establish a system of Compulsory Health Insurance. The workman should pay a portion of the premium out of his meagre wage and his employer should pay a portion and the great paternal State would administer the funds. No one suggested that, if the worker was paid decent wages, he could do all of this for himself. Decent wages did not fit in with the great Deutschland uber alles scheme. Cheap labor and long hours meant that Germany could undersell her competitors in other countries, where the standard of living was higher. Nothing was said of the great subsidies paid to employers that they might by cheapening goods control the markets of the world. Nothing was said that labor eventually paid the subsidies in the form of taxes.

When the never-to-well paid physician rose to remark "I am absolutely essential to the working out of his plan, where do I come in." He was told that he was not considered. The individual must suffer that the mass might be benefited. He was given the choice of abandoning his profession, or going in and by making it quantity instead of quality in the medical service rendered, eke out a living for himself and his family. Here was class legislation with a vengeance.

In 1911, William Harbutt Dawson, an English writer, published a book called "Social Insurance in Germany." He very frankly states that he is enchanted with the system and its results. Here are some of the results as set down on Page 79, Chapter 8.

"The most serious controversy to which the working of the Sickness Insurance Law has given rise is the controversy between the funds and the doctors and it is not likely that the recent revision of the law will end this long continued feud. Two questions have been uppermost—the question of the method and measure of payment and that of "free choice" of doctors. The Government has consistently refused to side with the medical profession in its demand that the principle of free choice of doctor should apply in every case. In a bill, the Government endeavored to make a *modus vivendi* which should put an end to the constant disputes between the sickness funds and the doctors. The explanatory memorandum dealt

with this question in considerable detail; it stated

"It is lamentable that for many years keen discussions have occurred between the doctors and the sickness insurance authorities, *resulting in many places in bitter disputes and a state of open conflict. Disputes of this kind, however, are often prejudicial to the proper medical care of the sick and lead to serious public injury.* The abuses have reached such proportions that legal measures were emphatically called for in the most various quarters as the only practicable course and in fact it is no longer possible to evade the duty of seeking a remedy.

That the introduction of statutory sickness insurance has in general injured the interests of the medical profession cannot be acknowledged. It is certain that the doctors as a whole are indebted to this institution for many benefits, and particularly for an *enormously increased demand for medical assistance and for greater security of payment.*"

If owing to a large and to some extent *excessive* influx into the medical profession which has been observable since the introduction of the Sickness Insurance law, the individual doctors have not been benefited proportionately, that is not the fault of the Insurance laws."

No one will be tempted to question the German Government's statement that there was an "enormously increased demand for medical assistance but one can reasonably question whether the touted "security" offset the small returns. Here we have the concrete example of Germany's love for the "Mass" in contradistinction to the "individual." It was Mass insurance, mass formation, because masses can be made perfectly obedient, while the individual is always an unknown quantity. Yet the mass is made up of individuals and common sense tells us that by weakening the individual you weaken the mass accordingly. The great German Mass idea has had its day in court and the Great War tried it and found it wanting.

But the medical profession of this country need not be concerned to-day about what Compulsory Health Insurance meant to the poorly paid, overworked, verbotenized pre-war German workman. *The question that is of vital importance to the American is, who is trying to fasten this same system on the necks of the American people and on the necks of the medical profession?* For five years more or less, an organization calling itself "The American Association of Labor Legislation with headquarters in New York City have been working to

give "Compulsory Health Insurance" a foothold in this country. Their claim is that it is for the benefit of the laborer and that he wants it. Yet Samuel Gompers, head of the American Federation of Labor will have none of it and I venture to say that not one person in a hundred thousand outside of the medical profession know what it is all about.

In taking up the work of the Committee on Civic and Industrial Relations of the Michigan State Medical Society, the Chairman frankly admitted that he knew nothing of the subject but that he would bring to its study an absolutely unbiased mind. He wrote to the Surgeon General for information on the question of Compulsory Health Insurance. The reply he received was from Mr. John B. Andrews, Secretary of the American Association for Labor Legislation. Under date of Nov. 20, 1919, Mr. Andrews wrote:

"Your request for information concerning health insurance has reached me after having been endorsed over from the Surgeon General of the War Department to the Surgeon General of the Public Health Service and thus on to me. Under separate cover, I am sending you a copy of the health insurance bill as it passed the senate of New York last April. It failed to pass the House due to the autocratic action of the speaker who held the bill in Committee. The principles embodied in this bill have been generally followed in the bill as it has been introduced in the legislature of other states.

Under separate cover, *I am sending you a copy of the recent report of the Social Insurance Committee of the American Medical Association and also that made by the United States Public Health Service.*"

On the letter head of this American Association for Labor Legislation, I found the names of Alexander Lambert and I. M. Rubinow. The one is the President of the American Medical Association; the other was appointed by Dr. Lambert as Executive Secretary of the A. M. A. Committee appointed to examine into and report on the question of Compulsory Health Insurance. The fact that Dr. Rubinow had been an avowed champion of Compulsory Health Insurance did not seem to make his appointment a questionable one in the eyes of Dr. Lambert.

Seeking further information, the Chairman wrote Dr. Frederick R. Green, Secretary of the Council on Health and Public Instruction American Medical Association. Under date of Nov. 10, 1919, Dr. Green wrote:

"In case a social insurance bill is introduced

in your Legislature, "*I wouldn't attempt to fight it openly, but I would have a bill or resolution introduced providing for a commission to study the subject and report next year. I would also endeavor to prevent your State Society from taking any positive action on the subject one way or the other.* The principal interest of physicians is that they are expected to furnish the medical service necessary in operating the law. Many physicians without understanding the question take a violently antagonistic attitude and are unreasonable in their opposition. This not only does no good but it prejudices the public against the arguments of the medical profession."

On Nov. 17, 1919, in answer to a letter, Dr. Green wrote:

"The discussions of the question (Compulsory Health Insurance) in this country have been almost entirely ex-parte and strongly biased either for or against. I have always maintained that it was essentially a problem in practical sociology and not a medical problem but that the medical profession should be thoroughly informed on the question and especially should be able to take its own position.

Unfortunately in the majority of states in which this question has come up for discussion, the medical profession has been divided into two camps; the first, a small one who were strongly influenced by the attitude of the theoretical sociologists in favor of the plan and an overwhelming majority who were opposed to the proposition without investigation, because they feared it would hurt their business. My *personal* opinion is that the advocates of social insurance have as yet failed to make out a case on the two essential points which I tried to outline in my first letter; First that there is a problem of sufficient importance in this country to demand governmental intervention; and second that the proposed social insurance plan is the best remedy for the situation. Until this can be proven, there is no basis for an argument in favor of Compulsory State Social Insurance."

On January 29, 1920, in answer to questions from the Chairman of the Committee on Civic and Industrial Relations relative to the activities of Dr. Lambert, President of the American Medical Association, and Dr. I. M. Rubinow, whose pamphlets on Compulsory Health Insurance are sent out by the A. M. A.,

Dr. Green wrote:

"Regarding Dr. Lambert's personal position, I am hardly qualified to speak. I should say from close association with him for many years

that he is intensely interested in the question (Compulsory Health Insurance) and feels keenly its immense social importance. I think in the beginning he had a leaning toward some form of state controlled distribution as the cost of illness. Whether he is at present supporting the so-called Davenport Bill in New York, I do not know. The Medical Society of the State of New York has definitely gone on record against it. Regarding your fourth question, I know of no reason for assuming that Dr. Lambert is representing the American Association for Labor Legislation.

My *personal feeling* ever since this discussion was begun over ten years ago has been one of suspended judgment up to the last year. Since the publication of the reports of the various commissions and the broader discussion of this subject, *I am unable to see that the advocates of social insurance* have proven either the need for such a plan in this country or that, if adopted, it would prove a remedy for the conditions complained of."

The advice of the secretary of the Council on Health and Public Instruction not to take a stand for or against a measure which promised to vitally affect the medical profession was to say the least puzzling. In the search for information, the Chairman wrote Dr. M. Hemingway Merriman, President of the West Side Clinical Society of New York City. This Society disclaims any connection with politics and are definitely opposed to Compulsory Medical Insurance. They have expressed their views in a well thought out pamphlet entitled Information, Argument and Resolutions regarding the State Health Insurance bill.

Dr. Hemingway referred the letter to Dr. Eden D. Delphy, Chairman of the Health Insurance Committee of the Medical Society of the County of New York.

Under date of January 27, 1920, Dr. Delphy wrote:

"For some time past we who are working for the best interest of the medical profession have been aware that there has been some *insidious* under current of influence which has seriously militated against our success in our work. At a meeting of the State Society last April a resolution was introduced as follows: Resolved;

"That the delegates of the Medical Society of the State of New York be and are hereby instructed to introduce a resolution in the House of Delegates OPPOSING the scheme of Compulsory Health Insurance and to support it in every way possible."

But although this resolution was carried by an overwhelming majority, all they did was to introduce into the House of Delegates of the A. M. A. their resolution of instructions. You will see what was done with it in the House of Delegates as indicated by the 'proceedings' in the Journal, June 21, 1919, page 1836. We expect to adopt a similar resolution at our Annual Meeting this year and if we can get the assistance of your and other State Delegates, it will not suffer such a humiliating disposition."

This is the situation that confronts the medical fraternity of the United States to-day. The Secretary of the Council on Health and Public Instruction of the American Medical Association advises Michigan to take no stand for or against Compulsory Health Insurance, while its sister State, New York, is entering on its fourth year of fighting against a measure which it believes will do untold harm to its people and to the medical profession. The President of the Great Central Organization, The American Medical Association, permitting his name to be used on the letter head of an organization. The American Association for Labor Legislation which is fighting for the measure and against the medical profession. The appointment by Dr. Lambert of Dr. Rubinow as Executive Secretary of the A. M. A. Committee to study and report on Social Insurance, in the face of the fact Dr. Rubinow had been an advocate of the scheme for fifteen years. A leopard may change his spots but a statistician who has proved his point by figures, never. The sending out of the Lambert-Rubinow pamphlets by the Council on Health and Public Instruction and the fact that the same pamphlets are being sent out by the American Association for Labor Legislation.

The Secretary of the Council on Health and Public Instruction states that after ten years of study, he has arrived at the conclusion that there is no cause for action on Compulsory Health Insurance. Are the great rank and file, men who work hard, pay their dues promptly, read their American Medical Journal, getting the benefit of this change of mind—are the rank and file in other states being given the history of the fight being waged in New York. Are delegates who defy positive instructions from their State Society taken to task for their action. The answer is No. Academic discussions are there but no news.

Some may say we have troubles enough of our own, why borrow those of New York. The strength of the wolf is the pack and the

strength of the pack is the wolf. The American Association for Labor Legislation hopes in time to worry New York into quitting. Then it will enter another state and worry that state into submission and then another until its ultimate goal is reached in an amendment to the Constitution of the United States and then Compulsory Health Insurance, the child of Otto, Prince von Bismarck and Political Necessity will rule in a land which produced Abraham Lincoln, the individual, who had the good fortune to live in a time when the individual counted.

Let the House of Delegates of the American Medical Association stop this guerilla warfare. Come out in the open and fight for or against. The time has come for a show down and then let the medical profession fight as a unit and not like a number of loosely connected allies.

GEORGE E. FROTHINGHAM.

KALAMAZOO ACADEMY.

Under our department of County Society News there is given a full report of the activities of the Kalamazoo Academy for the year 1919. Although a little late the report did not reach us until this month.

We are calling attention to this report because it reveals in splendid detail, the activities of an aggressive organization.

After reading the report of the officers direct your attention to the subjects discussed, the essayists, and the men who participated in the discussion. In our opinion that information explains the life and activity of the academy—live topics, and full discussions.

We have other societies equally as active for the same reason. What we desire to disseminate is—those of our county societies who are looking about for a plan of activity may gain an incentive from this report.

Bristles.

All of us are breathing a sigh of relief, now that the "Flu" has abated to a degree and we are not being awakened from a catch-as-catch-can slumber by a frantic call on the telephone in the wee small hours of the night, after we have just finished wearing out about \$25.00 worth of automobile tire in our calls during the day.

In a respite of this sort, we probably are best

able to collect our thoughts on subjects concerning ourselves.

When we think back just one year and see the difference in severity between the epidemic of then and now, are we able to visualize what the medical profession has done in the way of progress; in having developed, after much investigation and research, better methods with which to combat this dread disease, which last winter virtually succeeded in throttling our people.

From the gigantic proportions of the dread antagonist, the profession was quick to realize that only by a concerted, almost superhuman effort would they be able to cope with the situation and they were not long in putting their shoulders to the wheel and fighting for a common cause.

To have thus conquered for the sake of humanity should go to posterity as one of the real achievements of this or any other age. It is something to which each one, who fulfilled his little part, can point with pride, knowing that his efforts, no matter how small, were, by being welded into the whole scheme, able to accomplish this great step in the right direction.

It is unnecessary, then, fellow members, for us to endeavor to tell you what CAN be accomplished. You have SEEN. You have been, in fact, an integral part in one of the greatest boons to mankind. If co-operation and intelligent combination of effort can do so much for you in one small stratum of your endeavors, why will it not be the means of advancing you always, both professionally and economically.

It will. There is no "if" to be considered. It is only necessary to do your rightful share. Give us your co-operation in our undertakings. They are for you—one of us.

Editorial Comments

In recent issues we have been publishing extracts and summarizations of some of the more interesting articles that are appearing in medical literature. We hope to be able to continue to do so. The point we wish to make and acquaint our readers with is that these articles are prepared for us by Dr. Leo C. Donnelly of Detroit. We have attempted to give him credit but often his name has been omitted by typographical necessity. We want to acknowledge this labor and express our appreciation to the Doctor.

Our April issue will contain the preliminary program for our annual meeting at Kalamazoo,

May 25, 26, 27th. The Program Committee met in Kalamazoo on Feb. 3d and completed the details of the meeting.

An attendance of at least one thousand members is being planned for our Kalamazoo Annual Meeting.

When druggists are charging one dollar for four ounces of soap linament and one dollar and a quarter to one dollar and a half for a four ounce mixture of ordinary drugs they are not missing an opportunity of indulging in profiteering. "Everybody is doing it" and a good many of our druggists are well up in the front ranks of the "profit grabbing mob."

In spite of the announced opinions of authoritative serologists that vaccination or sero inoculation for "flu" and pneumonia prevention is valueless, many there are who recommend and give these serums. We cannot help but wonder if it is just fair, if it is right, to say nothing of scientific practice, to employ or administer a serum or vaccine of unproven merit and accept payment for such service. Such practice borders very closely upon commercialism. And speaking of commercialism the practice is becoming more prevalent. The attitude seems to be developing of "get the money first" and fit the treatment so that the greatest financial returns ensue. Woe betide the day when the profession degenerates to dollar idolatry. Our farmers are demanding "equal pay for an equal day." The profession might adopt the slogan "Equal pay for equal service" and unless we do we need not sob if legislation steps in to limit our sphere and activity. "Shooting" the serum at two dollars per is not honest or scientific practice, especially when our serologists state that such practice is only effective in a limited number of conditions. In addition one violates the confidence of our patients and stoops to fake salesmanship.

Seventeen dressings for a one inch scalp laceration with no complications and a bill of thirty-four dollars, when experience and knowledge of rapid repair of scalp wounds has established five dressings at the most as the average requirement. Forty-one dressings and a bill for \$82 for suture of a two and a half inch laceration of the fore arm without involvement of the deep structures or vessels. Do you wonder manufacturers are employing nurses in our larger factories to care for these minor industrial injuries. These bills

were shown us by an Ohio Superintendent with the query—"What do you think of these for 'hold-ups.'" It resolves itself into the conclusion that some there are, who are "farming" their industrial cases and charging for unnecessary redressings. We subscribe to full fees but also admit that full service must be rendered in return, without any padding.

The Genesee County Society is right up in the front ranks of our active societies. We refer our members to their reports in our County Society news pages. We repeat—society activity among our state units is flourishing. May there be no trailers.

Now comes along a couple of colonels of the regular medical corp with a new plan for reorganization of the Medical Reserve Corp and a carefully worded admission of the organizational administrative defects and failures of the corp during the recent war. The whole article is full of the "old army" system and outlines a plan which puts the whole plan in new words but permits the proposed reorganization to still retain practically all the features towards which criticism is directed. What we need is some new heads who are unbiased by the army "customs and courtesies" of the past. When such a change occurs we may hope to have a reserve corp in which membership will be an inducement.

From announcements sent out, those who attend the University Clinics each month, may obtain comfortable quarters at the Michigan Union. Reservations should be secured in advance from the Superintendent of the University Hospital. This arrangement creates extra inducements for attending these Clinics.

The Wayne County Medical Society passed a resolution pledging support to carry out the provisions of the Venereal Law and endorsing its provisions and intent.

At the time this is written the daily press have just announced the details of the Lansing resignation and President Wilson's threat to withdraw from European affairs. Would it not be well that his medical advisors recommend his retirement from public life. Now that we have been given a partial insight as to the nature and extent of his illness we cannot help but conclude that his mentality is no longer "prodigious" and that physically as well as mentally he is too ill to longer exercise his powers as President. Admiral Grayson is assuming a grave responsibility in permitting his distinguished patient to devote any time to executive duties.

Correspondence

Calumet, Feb. 4, 1920.

Dr. F. C. Warnshuis, Editor,
Grand Rapids, Michigan.

Dear Doctor:

I thought you would be interested in knowing of the action which the Houghton County Medical Society has taken in regard to its fee bill. We had the bills printed with schedule of fees and the signatures of practically every physician in the County including non-members of the local society. The fee bill specifies that its provisions are not binding in the case of indigent worthy individuals, and the physician has the right to estimate the actual value in time and skill employed in a long continued series of treatments or calls.

At the January meeting the following resolution was introduced:

Resolved: Whereas, a schedule of fees to be charged by the members of the Houghton County Medical Society has been endorsed and subscribed to by every member of said county and

Whereas certain members of this society are giving their services to certain lodges and organizations for a stipulated ridiculous fee and in some instances even gratuitously, thereby certainly detracting from the dignity of our profession as well as doing gross injustice to those of our colleagues who refuse to accept such practice with its belittling compensation, and

Whereas, we believe that such procedure on the part of certain members renders absolutely inconsistent the fee bill which this society has individually and collectively agreed to observe.

Therefore be it resolved by this Society that our secretary with his monthly notice of meeting inform each member that the matter will be taken up at our next regular monthly meeting and such ways and means shall then and there be adopted to correct this condition as shall be approved by a majority vote of members present.

At our February meeting held Feb. 2, 1920, the above resolution came up for discussion and the following resolution was introduced and by an overwhelming majority it was voted that the resolution should be the basis of the enforcement of the provisions of the fee bill.

Resolution:

RESOLVED, that it be the sense of this Society, that any member who contracts for a monthly or yearly fee to render medical or surgical or obstetrical treatment to the personnel of any lodge or industrial organization, or their families, other than mines and mills, which custom for years, here, has rendered professionally ethical, or who shall give gratuitous service to

any organization whatsoever, unless it be of a philanthropic charity order, shall be automatically dropped from membership in our Society, by reason of being unethical and absolutely unfair toward other members, in the sense of having rendered inconsistent and of no import, the fee-bill of this Society, which every member has mutually promised to observe.

The subject of compulsory health insurance was also brought up and it was agreed that it should claim the entire attention of our March meeting at which time the local society will put itself on record in regard to this matter which is so little understood and which is of such vital importance to both the general public and the medical profession.

Fraternally,
Houghton County Medical Society.
R. M. Howell, Secretary.

PROFESSIONAL GUILD OF KINGS COUNTY.

1313 Bedford Avenue,
Brooklyn, New York.

Medical Society of the County of Kings,
Kings County Pharmaceutical Society,
Kings County Dental Society,
Greater Ridgewood Medical Society,
Greenpoint or North Brooklyn Medical Soc.,
Bay Ridge Medical Society,
Second District Medical Society,
Homeopathic Medical Society,
Pharmaceutical Society East New York,
Flat Bush Medical Society,
East New York Medical Society,
Williamsburg Medical Society.

Feb. 11, 1920.

My Dear Dr. Frothingham:

Pardon this belated reply to your letter of the 5th.; we have had a busy time with the flu in this part of the country. I have sent you, however, some literature which forms a part of the Campaign of Education of Our Guild and am enclosing you a chart prepared by Dr. E. Mac D. Stanton of Schenectady, New York, who is doing the same kind of work in this county. Just total the figures thereon and you will find that the 14 companies doing "Compensation Insurance" received in premiums \$10,894,000 or an average of \$778,143—that the average loss ratio was 46.70 per cent. and the average expense ratio was 24.21 per cent. of the premium. Compare this with the conservative estimate of the probable expense of administration (16%) on my chart and you will see that we are on the right track as to the uneconomic features of this Compulsory Health Insurance. In a day or so I will mail you a blue

print of another calculation which will show the transit from raw material to the ultimate consumer which answers the ONLY argument that we have been able to elicit from the proponents of Compulsory Health Insurance on the element of the COST of the scheme except the puerile reply of Senator Davenport (the father of the bill) that the "cost is distributed in increased efficiency and good will."

Davenport is Professor of Political Economy at Hamilton College (New York State) which is one of the beneficiaries of the "sage Foundation" which is also a contributor to the American Association for Labor Legislation of which Dr. Alexander Lambert is an officer (member of the General Administrative Council).

I have had 25 copies of a reprint of Dr. Heeve's speech and my own (the symposium of the L. I. Med. Journal) sent to you. If you wish some copies of the Chart (mine) which I sent you, we have the electrotpe and can run off as many as you wish. As you know "pigs is pigs" and "Compulsory Health Insurance" is the same whether in New York or in Michigan or in New Jersey, with this exception, that the American Association invariably tries to put over the broadest kind of a bill and is prepared to cut and fit and change IF ONLY THE MEDICAL MEN WILL HELP PASS THE NAKED BILL they will see to it that clothing, in the shape of amendments, is supplied once the policy is fastened on a State. They boast that a compulsory health insurance bill is being introduced in a number of states, so far, thank God, no state has been silly enough to let it pass. It is rather shameful that we have to spend our time, money and energy in educating ourselves and the public to its viciousness, but it is a part of our duty as the Monitors of the Public Health.

As to Dr. Lambert: At the hearing on the Davenport-Donahue Bill in Albany last March (19th), despite the fact that the A.M.A. is on record against the measure, he appeared, resplendent in a Y. M. C. A. uniform (as a Colonel I think) and proceeded to use the glamour of his Presidency of the A. M. A. to fortify his advocacy of the bill. On Oct. 21st, through some pussyfooting of the officer-body of our County Society (which is on record against the measure) (and a member of our guild as well) Drs. Lambert, Madill and Gaylord were invited to speak on Compulsory Health Insurance. Gaylord did not appear and Dr. Kosmak took his place. It was staged as an ex-parte exposition of the PROPONENTS viewpoint but we have one fine Guild in this county made up of the Medical, Dental and Pharmaceutical Societies, as such, and the Doc-

tors, Dentists and Druggists as CITIZENS, in a chapter of the guild in each of the Assembly Districts of the county. I organized them and I know them and they know me and when I said I wanted to answer these people the Chapters were a unit in demanding my appearance and the Officer-Body made a virtue of necessity and yielded. When we got through, the Medical Society of the County in Executive Session passed a resolution which contained everything but the cash register and **bound our delegates to the State Society uncompromisingly against Compulsory Health Insurance.** Result the New York County followed suit and the State Society's Special Committee to study and report on the matter presented a "Report," a copy of which I enclose.

In New York State, we expect to beat the American Association for Labor Legislation but unfortunately we had no constitutional provision for a referendum (as California had) and we must make up our minds to defeat this pernicious legislation, we must defeat the instigator (the A. A. L. L.) and bring before American minds the German origin of both and the pro-German, pro-unrest affiliations of those who Officer it and drive home the utter wastefulness in money and morale of this hysterical type of legislation **AND WE MUST KEEP AT IT, YEAR AFTER YEAR AND BECOME CITIZENS OF OUR STATE AS WELL AS CITIZENS IN IT.** The sacro sanct idea of wrapping the mantle of scientific absorption about us and drawing a sacred circle of Medical Ethics about us and tabooing Civics (aye or Politics) is unfair to ourselves and to the people who depend upon us to safeguard them in matters of health. Here in New York State we have pretty well relieved ourselves of the just reproach which was voiced to me by a Senator at Albany, March 19, last, before the "Hearing on the Davenport-Donahue Bill," when he said:

"Doctor, you are dearest beings on earth and we love every hair on your head—personally—but as a "Class" you are PITIABLE. You spend your time, money and energy in sustaining Scientific Societies for the advancement of Science and the good of your fellow man **AND YOU DON'T KNOW THE FIRST THING ABOUT THE LAW OF SELF PRESERVATION.** You are wasting your time in Albany. I have reason to believe the Bill will not pass **THIS SESSION.** **GO HOME AND ORGANIZE** and come back next year and we will have to listen to you."

We did. I am, have been and expect to remain a Democrat but I was largely instrumental in

organizing and directing a Campaign which **RETIRED TEN DEMOCRATIC CANDIDATES FOR ASSEMBLY FROM THIS COUNTY AND NO CHAPTER INDORSED OR OPPOSED (OFFICIALLY) ANY CANDIDATE;** neither did the guild. But when the underground telegraph got through and our patients and our friends registered their confidence in us, when they cast their ballots on Nov. 4 for Assembly District Candidates, the Political leaders woke up to the fact that the March of Paternalism had taken one step too far and had swung into action a group of citizens, who by virtue of their education and training are the best qualified teachers in Society. I think you will agree with me that the Guild plan is good for Michigan. We now have a State Central Committee (of which I am chairman) made up of the Public Health Committee Chairmen of similar organizations of Medical Citizens in each of the 62 counties in the State. Every Medical, Dental and Pharmaceutical Society in this county has passed an identical resolution, designating our Guild as its spokesman at any hearing in Albany on this measure. Some Unity? Some force? Some Organization? This is not bombast, because what the politicians indulgently regarded last summer as a Pink Tea has come to be respected as a force to be reckoned with and there is not one single Club usable against the Guild which was non partisan and big enough and **WISE ENOUGH** to reject all offers of political affiliations and strong enough to resent threats of political reprisal. The real secret is that the people still love their Doctors and believe in their sincerity of purpose and they are not unmindful of the devotion and self sacrificing which marked their work during the dreadful epidemic of "Flu" last Winter.

I shall be glad to hear from you and will see to it that all the literature we issue is mailed to you.

Fraternally,

John J. A. O'Reilly,
405 Union Street,
Brooklyn, New York.

Deaths

Doctor W. J. Herrington, of Bad Axe, died February 10 at the Hubbard Memorial Hospital after a short illness of pneumonia.

Doctor Herrington was 61 years of age, and

was a graduate of the class of 1882 of the University of Michigan.

His widow and five children survive.

Doctor Bruce R. Leighton, of Kalamazoo, died January 24th at the New Borgess Hospital at the age of 37 years.

Doctor Leighton was born at Hopkins, was a graduate of the Western Reserve University of Cleveland and had practiced at Kalamazoo about seven years.

Besides the widow, the doctor leaves his parents, Doctor and Mrs. Leighton of Hopkins, Mich.

Doctor Philip Gray Sanderson died at his home in Detroit, January 28th, of pneumonia, having been ill but three days.

He was 52 years of age, was born in Detroit, and was a graduate of the University of Illinois, class of 1898.

The widow, Doctor Suzanne M. Sanderson, a mother, a brother, and two sisters survive him.

Doctor Leon B. Harris, city physician of Saginaw, died at the Saginaw General Hospital, January 12th.

Doctor Harris was born in Saginaw October 23, 1886, and was a graduate of the University of Michigan. He enlisted in the medical corps of the United States Army in August, 1917. He was first stationed at Fort Riley, Kansas, and in January, 1918, was transferred to Camp Logan, Texas, and in June, 1918, went to France.

He leaves a widow, a daughter, his parents and one sister.

Doctor James Fraser, of Lexington, Mich., died at his home January 27, after an illness of several weeks. Doctor Fraser had been failing in health for a number of years but attended to his practice until about Christmas time.

Dr. Joseph Harris Cowell.

In the death of Dr. Joseph Harris Cowell, of Saginaw, January 17th, the profession in Michigan has lost one of its most prominent and valued members.

Dr. Cowell was born in 1847, and received his literary education at Brown University, graduating in 1869. He was a member of Zeta Psi. Subsequently he graduated from the Medical Department, University of Michigan, 1871, and since then has been practicing medicine in Saginaw almost continuously.

As a youth of fifteen, he enlisted in the U. S. Army, and served with distinction in the War of the Rebellion.

From 1901 to 1913 (three terms) he was an active member of the State Board of Registration in Medicine. His service on the medical board was of a high order, ever advocating and supporting measures involving higher standards of medical qualifications for practice in Michigan.

Dr. Cowell's status as a citizen and a physician in Saginaw, and throughout the State, was exceedingly high, and his passing will be a matter of deep and lasting sorrow to a very large and influential clientele, whom he served faithfully and efficiently for some fifty years. The Biblical quotation, "Well done, thou good and faithful servant," is especially applicable to Dr. Cowell's life and practice.

Doctor Miles C. Bristol, of Bay City, Mich., died last month at the age of 52 years.

Doctor Bristol was a graduate of the class of 1894 of the Long Island College Hospital after which he took a preparatory course at the Cornell University. He was serving his second term as coroner of Bay County and was also a member of the Bay City Board of Health.

Doctor R. F. Boonstra, of Detroit, died of pneumonia January 30, 1920. He was a graduate of the Literary and Medical Departments of the University of Michigan. He received his M.D. from that institution in 1913. He was formerly head physician for Frederick Stearns & Co. of Detroit and a volunteer in the medical aviation research bureau. At the time of this death he was a Detroit Health Department physician.

Doctor Benjamin Brodie was born in Detroit, April 6, 1859, and died in San Francisco, Jan. 22, 1920. He was the son of Doctor William and Jane Whitfield Brodie. He was educated in the public schools of Detroit, graduated from the University of Michigan receiving the degree of A. B. in 1882. He obtained his M. D. from the Michigan College of Medicine in 1884. He was married to Mrs. Anne Tallant Tubbes in Washington, D. C., on Nov. 14, 1907. He practiced in Detroit until a few years ago when he removed to California. He was a member of the staffs of Harper Hospital, St. Mary's Hospital, Women's Hospital, and the Solvay General Hospital. He was Chief Surgeon for the Detroit United Railway and the Detroit Fire Department. He was House physician for many years to the old

Russell House. He was local surgeon for the Grand Trunk Railroad. He was a member of the Wayne County Medical Society, the Michigan State Medical Society, and the American Medical Association. He was a member of the Detroit Club, Yondo tega Club, University Club, Country Club, Detroit Boat Club and the Harmonie Club.

The deaths of the following doctors not members of the State Society have been reported: J. H. Cowell, of Saginaw, and R. F. Boonstra, of Detroit.

State News Notes

General practice, hustling village, rich farming community. Ionia County. Collections over \$7,000 last year. Office and contents for sale. Electric lights. City water. Care Journal.

COLLECTIONS.

Physicians' Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

MEDICAL LEGISLATION.

At the general meeting of the Wayne County Medical Society held Monday evening, January 19, a free discussion was indulged in on the subject of legislation introduced and passed during the legislative session of 1919, the object of which legislation was the suppression of venereal disease. The speaker of the evening was Dr. Guy Kiefer, member of the State Board of Health. Dr. Kiefer outlined the nature of the legislation, which came into effect October last. He went thoroughly into the purpose behind each legal enactment and stated that all such legislation was tentative and subject to modification. In some instances the law should be made more strict, in others it should be modified. He spoke of the effectiveness of recording all communicable diseases for several reasons. Among these the reporting of all cases aids in the compilation of accurate statistics without which no progress could be made. The insisting upon treatment by keeping all cases under observation tended to curtail disease. He called for a full and free discussion, especially from those who had objections to the new measures. One speaker objected on the grounds of the alleged illegality of revealing to a third person what should be kept

sacred between patient and physician. He thought it was an invasion of the private rights of physicians, namely, the compulsory reporting of cases of venereal disease. This objection was overruled on the ground that the safety and welfare of the people was the supreme law. The consensus of the meeting was overwhelmingly in favor of backing up the State Health Board in its efforts to reduce the venereal evil to a minimum, and a resolution was passed favoring this action.

Flint physicians have united upon a plan for providing a medical building as imparted by the following Press item:

Money has been subscribed by physicians, surgeons and dentists of the city for the erection of a six-story brick building at Detroit street and Fourth avenue to be used exclusively by them for the practice of their professions. Construction will be begun as soon as arrangements can be completed, probably within a few weeks.

The project really was started a year or more ago when half a dozen men discussed its feasibility as a topic of conversation. It had been discussed from time to time until Tuesday night, when definite steps were taken at a meeting of about 25 physicians and dentists. Further action was taken at a meeting of the Genesee County Medical Society in the Dryden building yesterday when subscriptions were signed.

At the former meeting the Flint Medical Building Association was organized with the following temporary officers: Dr. M. S. Knapp, chairman; Dr. L. R. Himmelberger, Secretary; Dr. J. C. Benson, Treasurer. More than \$25,000 was subscribed for shares in the **proposed stock company** of \$1,000 each. Subsequently more than twice that amount was taken.

Articles of incorporation have been filed with the Secretary of State in Lansing. As soon as the necessary papers are returned a permanent organization will be perfected and active measures taken to proceed towards construction. It is expected that the plant will cost upwards of \$100,000 and funds will be obtained from a finance corporation.

The former Alva Davis home on the northwest corner of Detroit street and Fourth avenue, one of the old landmarks in Flint, was purchased for the site. The property has a frontage of 132 feet on each street. The main object in locating there was to get away from the noise of business streets.

The main building will be 40 feet wide on Detroit street and extend back on the inside line

of the lot 100 feet. An ell to the north will be built from the rear end. In this ell will be the entrance lobby and two elevators. This plan will afford opportunity for expansion by building another wing from Detroit street parallel to the original building.

A common reception room, with attendants, will be provided on each floor. A corridor 12 feet wide will extend the entire length of each floor, and opening off it on either side will be the various offices. Settees, both long and circular, will be placed in the corridors. One room in the building, possibly one on each floor, will be devoted to library purposes, with books, periodicals, etc. A laboratory for bacteriological work is in the plans.

All lines of specialties in the medical and dental professions will be represented. The only benefit to be derived by the occupants will be closer associations and opportunities for discussions.

Original subscribers were 37 physicians and 13 dentists, but this list has since been augmented. Others who were not able to attend the meetings, because of illness or absence from town, are expected to subscribe. The 50 were: W. H. Marshall, C. D. Chapell, A. S. Wheelock, Harry W. Knapp, J. S. Beckwith, Robert G. Brown, E. G. Dimond, Leon M. Bogart, B. E. Burnell, A. J. Reynolds, J. H. Taylor, H. T. White, Harry S. Read, F. B. Miner, Carl F. Moll, Dwight G. Goodrich, Robert L. Phillips, George R. Goering, Frank E. Reeder, Henry J. Cook, George J. Curry, R. A. McGarry, W. H. Winchester, Lafon Jones, M. Wm. Clift, F. A. Roberts, H. E. Randall, J. C. Benson, C. P. Clark, H. D. Knapp, J. G. R. Manwaring, D. D. Knapp, C. C. Probert, L. R. Himmerlberger, M. S. Knapp, W. M. Miller, A. C. Blakely, J. J. Kurtz, H. J. Clark, J. H. Houton, E. C. Ryle, H. J. Mogford, R. A. Stephenson.

Announcement is made of the launching of the National Anesthesia Research Society, with the avowed purpose of collecting data and prosecuting original research in this field of medicine. The objects of the Society as set forth in the constitution are:

"To promote the science of anaesthesia and to enable its members, after first having obtained the approval of the Society, to submit without prejudice to the dental and medical professions, any views, findings, or accomplishments they have attained; to obtain from all available sources such information as is now extant concerning any material, liquid or gas, known to have anaesthetic properties; to arrange, in co-operation with dental, medical, and anaesthesia associations for the preparation and delivery of suitable, interesting and educational papers on the general subject, or relative to some particular anaesthetic; to use influence to prevent

the publication or circulation of any false or un-authentic statements concerning any and all conditions, symptoms, or phenomena prevailing during or after anaesthesia by any anaesthetic, and to prepare and distribute on request, forms on which such information can be tabulated with uniformity; to distribute by pamphlet or publication, as its funds may permit, and its governing powers authorize, such reliable data as it may collect or obtain through its members or others interested in the subject of anaesthesia, for use by the medical and dental professions; to co-operate with state authorities and other bodies in the preparation of suitable legislation to safeguard those to whom anaesthetics are administered as well as those called upon to administer them; to use its influence in every way and to give its aid toward the advancement of the Science of Anaesthesia."

The Research Committee which will have supervision of original work and the editing of material designed for the profession and professional press, is headed by F. H. McMechan, A.M., M.D., of Avon Lake, Ohio, editor of the Quarterly Supplement of the American Year Book of Anesthesia and Analgesia. W. I. Jones, D.D.S., president of the Inter-State Anesthetists' Association, will have an active part in the committee's work. Representative anesthetists of the country, who have distinguished themselves by research and progress in their field, are being invited to join the committee.

The Society has been endowed with limited funds which will permit it to demonstrate that there is a field of usefulness for it.

Calhoun County Society passed the following resolution:

Whereas, for the first time in history a graduate physician is a candidate for the nomination of President of the United States, and

Whereas, the Calhoun County Medical Society believes he would be as thorough and efficient as President as has been his record of military service, both as a medical officer and as an officer of the line, Therefore

Be it Resolved, That the Calhoun County Medical Society does, in meeting assembled, without regard to party affiliation, endorse the candidacy of Major General Leonard A. Wood for the nomination for President of the United States, and

Be it Further Resolved, That copies of these resolutions be sent to the Leonard Wood League and to the Chairman of the National, State and County Republican Committees.

The resolution was passed without a dissenting vote. The President was instructed to appoint a committee to take care of this matter. The Committee appointed consists of Dr. A. S. Kimball, Chairman, Dr. W. S. Shipp and Dr. James A. Elliott.

A committee of trustees of Queen's University, at a meeting held Jan. 3, 1920, unanimously agreed on plans for the reorganization and improvement of the medical school at Kingston. A full-time dean and an adequate number of full-time clinical professors are to be secured. The university expects to obtain entire control of the Kingston General Hospital; the hospital pathologic department will be further developed; a new system of records, including a complete follow-up record, will be installed, and a superintendent obtained who will be responsible for the medical administration of the hospital under the supervision of the university. It is estimated that the cost of rebuilding the hospital will be approximately \$750,000, of which sum \$550,000 is already assured. The expense of securing additional full-time clinical professors and the further development of the pathologic department will be approximately \$35,000, making a total estimated expenditure of \$785,000.

The Council on Medical Education of the American Medical Association, The Association of American Medical Colleges and the Federation of State Medical Boards will hold their annual meeting at the Congress Hotel, Chicago, on March 1, 2 and 3, 1920. This Conference promises to be a meeting of unusual interest.

The following men will give papers: Doctors Bevan, of Chicago; Strickler, of Denver; Colwell, of Chicago; Vincent, of New York; Jessup, of Iowa City; Darrach of New York; Klotz of Pittsburgh; Robinson, of St. Louis; Wilson, of Rochester (Minn.); Bierrinf, of Des Moines; Shepardson, of Springfield (Ill.); Baldy, of Philadelphia; Bardeen, of Madison (Wis.); Waite, of Cleveland; Carter of Galveston; Lyon, of Minneapolis; Folin, of Boston; Edmunds of Ann Arbor; Ewing, of New York; Kendall, of Chicago, and V. C. Vaughan, of Ann Arbor.

CELEBRATE THIRTIETH ANNIVERSARY.

The Thirtieth Anniversary of the founding of The Abbott Laboratories is being celebrated this month. This firm has recently established the precedent in the pharmaceutical field of placing their employes on profit sharing basis.

It is a notable fact and one worthy of commendation that more new medicinal chemicals, and council-passed products have come from the house of Abbott during the past five years than from any other firm in this country.

Unusual success attended the Junior Hop of the Detroit College of Medicine and Surgery, held Friday evening at the Hotel Statler. Valentine suggestions were observed in the decorations and also in the favors for the ladies, which were red heart-shaped boxes of bon-bons. The men received cigarette holders.

Assisting as patrons and patronesses were Dr. and Mrs. W. H. MacCracken, Dr. and Mrs. J. E. Davis, Dr. and Mrs. W. J. Seymour, Dr. and Mrs. Neal Haskins, Dr. and Mrs. Roy Andries and Dr. and Mrs. W. H. Manton.

The committee directing the ball comprised Leon F. Cobb, Miss Igma Wuerniss, Emil Rothman, Edward L. Rodd and Amherst Merriman.

Dr. J. V. Deacon, for many years connected with the Kansas State Board of Health, has accepted an appointment with the State Board of Health of Michigan. Dr. Deacon will have supervision over the "Communicable Disease" Division of that Department, and his many years experience in Public Health work will make him a most valuable member of that Board.

Washington University has received \$300,000 for the endowment of the department of pharmacology of its medical school. Half the sum was given by the General Education Board and half was raised by the medical school.

Dr. Robert Rosen announces his return from military service and the opening of his offices in Detroit with practice limited to Urology.

Dr. Frank Wade of Howe sustained a fractured arm when his sleigh tipped over.

Dr. W. A. Grant, formerly of Detroit, has located in Lyons.

Dr. Don M. Howell of Detroit has located in Grayling.

Dr. L. C. Harvie has been appointed city physician in Saginaw.

Dr. B. A. Miller has located in Monroe.

COUNTY SOCIETY NEWS

It is the Editor's desire to have this department of the Journal contain the report of every meeting that is held by a Local Society. Secretaries are urged to send in these reports promptly

ALPENA COUNTY.

The regular meeting of the Alpena Medical Society was held January 15th at the New Alpena House. Thirteen members responded to roll call out of a possible sixteen. The application of Dr. Ernest Foley of Alpena for membership was received and accepted.

On motion the Secretary was instructed to correspond with the Secretary of the Tuberculosis Department of the State Board of Health, asking Dr. Vanderslice to visit Alpena and hold a public clinic for diseases of the chest.

The President of the Society, Dr. Geo. Lister of Hillman, being detained to explain to the court, why certain venison was found at the camp without a license attached, sent in a letter of appreciation for his election, and made some suggestions for improving the meetings for the coming year.

The Alpena Hospital Association requested the Medical Society to appoint a committee to meet with them to discuss hospital administration. Drs. McKnight, Bonneville, and Dunlop were appointed.

Dr. J. D. Dunlop then read his paper on the Father in the home. The paper dealt with the lack of information of many fathers regarding the physical well-being of his children. The various points were thoroughly discussed by the members present.

The next meeting of the Society will be a party for the doctors and their wives. Mrs. Bell, McDaniels, and Williams were appointed the committee to make the arrangements.

ALPENA COUNTY.

The Alpena Medical Society enjoyed the first of a series of social gatherings in charge of the ladies, at the Trinity Parish House Tuesday, Feb. 17. Mrs. S. T. Bell, Mrs. F. J. McDaniels, and Mrs. C. M. Williams, were in charge. Dinner was served at 6:30 at the parish house, 25 being present. Following dinner the ladies supplied a short entertainment of musical numbers, after which cards and social conversation completed an enjoyable social evening.

BAY COUNTY.

Our annual meeting was held Monday evening, December 15, 1919, at the Winona Hotel at

which time the retiring President, Dr. C. M. Swantek, tendered the Society a sumptuous banquet. After the President gave a short terse address bearing on the present healthy activity of Bay County Medical Society the Secretary gave his report under three heads:

1. Report of Patriotic Fund.
2. Financial Report of Society itself.
3. Miscellaneous Report.

It was moved by Dr. C. H. Baker and supported by Dr. W. R. Ballard that the Secretary send his report to the Michigan State Medical Journal. Carried unanimously. I enclose for Journal with parts deleted for you to make use of what you as editor may regard as of any importance.

Second head was a full report of our local Society's financial standing. This report was very satisfactory to all members and of no interest to any other society; therefore it is not enclosed.

After Secretary's report, Bay County Medical Society elected the following officers for the ensuing year, viz. 1920:

- President—Dr. R. E. Scrafford.
 Vice-President—Dr. G. W. McDowell.
 Secretary and Treasurer—Dr. Morton Gallagher.
 Medico-Legal—Dr. T. A. Baird.
 First Delegate—Dr. C. M. Swantek.
 Second Delegate—Dr. M. Gallagher.
 First Alternate—Dr. G. W. Moore.
 Second Alternate—Dr. R. W. Brown.

Mr. President and members of Bay County Medical Society: I wish to make my report to you as your Secretary and Treasurer under the following heads:

1. A short resume of Patriotic Fund.
2. Financial Report of your Society.
3. Miscellaneous Reports.

Under the first heading, viz. Patriotic Fund, your Councillor for this district, Dr. John McLurg has informed us that Bay County Medical Society has been the only Medical Society in the State of Michigan, and as far as we know, of any other State which made up the difference in salary between a lieutenantcy and captaincy of those of our members who so valiantly gave up their lucrative practices to answer the call to serve their country in the late war.

Full amount paid in on Patriotic Fund was \$2,182.00.

Balance in Treasury at this meeting is \$31.10.

By motion this balance was turned over to the General Fund of the Society.

Under the third head, Miscellaneous Reports, you all know that at this time last year and for four months following we were all so worked in our profession that we, each and every one of us would have had to make a great sacrifice to stop at a call of the President for a meeting of our Society. I find that we did not have any meeting in January, had one in February, two in March, one in April, one in May and none in June (holidays July and August). Two regulars in September and one special. Two in October and two in November, so that in the year past we have had twelve meetings, seven since holidays which betokens the greatest activity and earnestness and progressiveness that this Society has ever experienced. Another surprise I want to give you is that the average attendance of these twelve meetings was twenty-three—as good an average and a shade better than the year we had over 100 at one meeting—coming from Saginaw, Flint, Midland, etc. •

We have this year dropped one from our roll because of non-payment of dues for at least three years—one for non-payment of dues for at least two years. One, Dr. Orth, has moved out of our jurisdiction without paying 1919. Dr. E. C. Goodwin has been taken care of as to the present but has not applied for transference; Dr. F. W. Brown has been transferred to State of California. Dr. C. V. Crane has received transference to Kent County Medical Society of Grand Rapids. McNaughton in arrears two years has left and I understand is in Detroit. Same history applies to G. McGeock. Moffat Flynn dropped from records because of five years in arrears. New members this year, Dr. G. R. Richards, Maurice C. Miller, H. M. Goud, Dr. Smith Omer, Dr. A. S. McDowell, Turner, Mich., Dr. John Slattery, Dr. J. H. McEwen, Dr. C. F. Roche, Dr. V. W. Bergstrom.

To-day we have sixty members on our roll.

Among things passed upon by this Society in the last year I would freshen your memory by resolution a year ago, "That this Society go on record that this city should engage a Health Officer—a Trained Sanitarian and Public Health Officer at a salary of \$5,000, to enable him to devote his entire time to correctly perform duties necessary at this time. That Dr. Wm. Kerr be urged to use his best efforts to have established

in the New Proposed Carnegie Library a medical section for best medical literature.

Next remember our alliance with the Board of Commerce. If hazy we had better get a new understanding with them. Mercy Hospital has not yet a staff appointed which is necessary for them to be a member of U. S. Hospital Association. They look to Bay County Medical Society for appointment of the staff.

Of the papers presented to this Society during that last year the ones given by Dr. McLurg, Dr. Harryhurst, Dr. F. S. Baird, and Dr. Gale deserve most high praise. The greatest treat for the medical practitioner was the one by Dr. Geo. McKean, "The Present the Opportune Time for the Medical Man." For the tonsil man or specialist, Dr. J. M. Robb was exceptional and Dr. Peterson's talk and illustration best served the surgeon or gynaecologist.

Gentlemen, I want to conclude by saying that the year coming is the one most propitious in the history of Bay County Medical Society, our membership begins with the largest in its history. One of our members is most highly honored by being President of Michigan State Medical Society, and with everything in our favor we each and every one must bend our best efforts to put a star on old Bay County Medical Society for year 1920; and, if we do, we can have the Medical Society meet right here in 1921 with pleasure. I would advise the invitation to be extended and backed and carried to completion to have the State meeting here in 1921.

DETROIT ACADEMY OF MEDICINE.

The Detroit Academy of Medicine met Jan. 27, 1920, in Dr. Rich's office. Dr. Don Griswold gave a talk on Influenza.

Abstract.

We know more about diphtheria than any other contagious disease and less about influenza. The incubation period of influenza is from 18-48 hours. Its onset is sudden with marked prostration.

Influenza and measles are contagious from a few hours before the first symptoms appear while the other contagious diseases are contagious from the time the first symptoms appear.

Influenza is a very hard disease to combat because of

1. Rapidity of spread.
 - a. Hemolytic strept. most easily and rapidly spread.
 - b. Influenza comes next.
 - c. Pfeiffer's Bacillus comes next.
2. Very early contagiousness.

The following organisms are found during the first week of the epidemic:

1. Non-hemolytic Strept.
2. Hemolytic Strept.
3. Pneumococcus.
4. Pfeiffer's Bacillus.

Deaths are highest during the first week of the disease with practically no deaths after the fourth week. Deaths are in inverse ratio to the predominance of the Pfeiffer's Bacilli present.

The Pfeiffer's Bacillus has little or nothing to do with the causation of influenza. At the present the bacteriological cause is not known.

The following pathological changes have been found in the organs of the body

1. Inflammation.
2. Hemorrhage.
3. Pus formation.

In some localities meningitis has followed influenza, due to the lowered resistance of those who are meningitic carriers.

Mastoiditis (due to hemolytic strept.) and appendicitis, peritonitis, and infections in all parts of the body have followed attacks of influenza. The same organisms have been found in the complications as were found in the influenza.

The first recent epidemic of influenza in Detroit occurred in the spring of 1918 and was followed by the fall of 1918 attack. The third outbreak in Detroit began about Jan. 20, 1920.

In the first 1,000 cases reported in Detroit in January, 60 per cent. were men and 30 per cent. were women.

The ages of the patients were as follows:

- 1-10 years—13 per cent.
- 10-20 years—10 per cent.
- 20-30 years—35 per cent.
- 30-40 years—25 per cent.
- 40-50 years—10 per cent.
- 50-60 years—3 per cent.

Of these 1,000 cases reported:

- 6 per cent. preschool age.
- 8 per cent. school age.
- 32 per cent. persons who stay at home.
- 16 per cent. office and store employees.
- 21 per cent. factory workers.
- 10 per cent. out of door workers.

Degree of illness:

1. Prostrated in bed—28 per cent.
2. Sick but up with clothes on—50 per cent.
3. Dressed but doing light work—27 per cent.
4. Gone out to work—3 per cent.

One attack renders fairly complete immunity for at least six months.

GENESEE COUNTY.

A joint meeting of the Genesee County Medical and Dental Societies was held on Wednesday, January 21, 1920, President Randall in the Chair. Dr. Bion East of Detroit read a paper on "War Injuries of the Face and Jaws." This was illustrated by lantern slides and presented many original ideas on the treatment of Facio-Maxillary work. Dr. J. Chalmers Lyons of Ann Arbor read a paper on "Focal Infections" and covered the subject in a masterly way. His paper showed clearly the need of co-operation between the Medical and Dental professions. Dr. George J. Goering of Flint presented the report of a case of Anencephalic Monstrosity and discussed the Embryological factors involved.

W. H. Marshall, Secretary.

The Genesee County Medical Society met on Wednesday, Feb. 4, 1920. Dr. Noah Bates was appointed Society Historian and directed to prepare a history of the Genesee County Society. Dr. M. W. Clift presented a Hirtz Compass and demonstrated its use in localizing foreign bodies in the tissues. A paper by Dr. W. J. Herrington of Bad Axe on "Intestinal Obstruction" was read by Dr. Reeder, Dr. Herrington having been prevented from attending by reason of illness. Dr. Roy A. McGarry of Flint read a paper on "Lumbar Puncture" dwelling principally on its use in diagnosing diseases of the Nervous System caused by Syphilis.

W. H. Marshall, Secretary.

KALAMAZOO ACADEMY OF MEDICINE. SECRETARY'S ANNUAL REPORT FOR 1919.

Your Secretary respectfully submits the following report:

During the year 1919, seventeen regular meetings have been held.

The Northern Tri-State Medical Society was the guest of the Academy, and a very valuable meeting was held.

The Scientific standard of the meetings during the year has been of exceedingly high grade, as will be shown by the report of the Program Committee.

The luncheons and social functions have been well taken care of by an especially efficient Social Committee.

The Academy has done considerable work along health legislation lines.

During the year nearly all of our members who were in Government service have returned to civil practice and the Academy has felt the influence of their presence with us, which has added

greatly to the value and inspiration of our meetings.

The total membership of the Academy at present is 134.

During the year we have lost two members by removal and one by death.

Six new members have been added to our list, and eleven lapsed members have been reinstated.

Your Secretary recognizes the value of the suggestion by some of our members that during the coming year, while we should not hold fewer scientific meetings, we should have more social functions that the membership may become better acquainted, and a closer spirit of fellowship be developed.

B. A. Shepard, Secretary.

REPORT OF THE PROGRAM COMMITTEE FOR THE YEAR 1919.

This Committee has provided seventeen programs during the year for the regular meetings of the Academy and part of the program for the Tri-State Society, which replaced one of our regular sessions. The remaining date of the calendar year was given over to the program of the Michigan State Medical Society. The names of the essayists are given elsewhere in this number of the bulletin. The subjects covered and the number of papers on each during the year were as follows:

| | |
|--|---|
| Internal medicine | 7 |
| General surgery | 6 |
| Bone surgery including fractures | 3 |
| Diagnosis | 6 |
| Tuberculosis | 2 |
| Social service | 2 |
| Gynecology | 1 |
| Obstetrics | 1 |
| Skin | 1 |
| Urology | 1 |
| Nervous and mental | 2 |
| Roll call with Case Reports | 1 |

It has been the policy of the Committee to have both outside and local talent represented at each meeting in as far as possible. One or more outside guests have given papers at each meeting but one. Local papers have been given on twelve of the seventeen programs. While this is an improvement over last year in the number of local members taking part the Committee feels that this number should be greatly increased in the future, as the quality of medical thinking in and about Kalamazoo is improved fully as much by the writing of papers as it is by listening to those of our guests.

The Committee has endeavored, as far as possible, to have a variety of subjects treated so that all members might get what they were especially interested in. We believe this endeavor has resulted in the bringing to our midst of a veritable post graduate course, the quality of which has merited the closing of the offices of all members on Academy days.

The Committee wishes to express its endorsement and appreciation of the manner in which the Secretary has displayed the programs and later abstracted the papers in the bulletin. We believe this is the successful method whereby all members of the Society can get the greatest amount of good from the scientific programs given.

C. E. Boys, S. R. Light, J. B. Jackson.

ANNUAL REPORT OF CLINICAL PROGRAM COMMITTEE.

During the year two clinical programs were given, as follows:

The first was given by Dr. C. D. Camp, of Ann Arbor, Michigan, on Nervous Diseases, before the Northern Tri-State Medical Society, which was a guest of the Kalamazoo Academy of Medicine, November 5, 1919.

The second was clinical program furnished by Dr. Udo J. Wile, of Ann Arbor, Michigan, on Skin Disease.

A considerable amount of clinical material was furnished for both of these occasions. These clinics were of unusual interest and furnished Post Graduate material which no member could afford to miss.

We wish to express our appreciation to those members of the Academy who co-operated with us in obtaining this material.

C. L. Bliss, Chairman.

REPORT OF THE ANTI-TUBERCULOSIS COMMITTEE.

As the Tuberculosis work has been carried on by the Director of Health and Welfare, the Anti-Tuberculosis Committee has no report to make.

The Academy met with the State Trudeau Society and had a fine program on Tuberculosis.

Walter Den Bleyker, Chairman.

ANNUAL REPORT OF PUBLIC HEALTH COMMITTEE.

To the President and Members of the Kalamazoo Academy of Medicine:

I herewith submit the report of the Committee on Public Health for the year 1919:

The report will deal briefly with some phases of diseases which present public health problems.

At the New Orleans meeting of the American Public Health Association influenza was discussed from many angles. There seemed to be a consensus of opinion on the following points: First, that we are likely to have a recurrence of influenza this winter, but that it will probably not be so severe as that experienced last year; second, there is no reliable vaccine or serum for the prevention or treatment of influenza; third, administrative measures should include isolation of the patient and provide proper medical, hospital and nursing care of those sick with influenza.

The preventative measures to be used by the public are to keep the physical resistance up to the highest point by practicing personal hygiene—cleanliness, which should include frequent washing of the hands, more frequent than is generally the case; proper clothing and as much out-of-doors as is possible; proper heating and ventilation of houses, offices and all places of public assembly—in short, public and personal hygiene. Although we can reasonably hope for a milder type of influenza we must not relax our vigilance.

Attention is called to the epidemic of mild scarlet fever which is now present in Kalamazoo and elsewhere. Many of these cases are so mild that they are not recognized and are found later in the schools with disquimating hands. A few doctors have refused to diagnose scarlet fever unless there is a frank eruption, notwithstanding the presence of a tongue and throat that suggest the disease.

Attention is directed to the statements of Osler, Rosenau and others to the effect that many cases of walking scarlet fever present little further evidence than a passing sore throat. Osler puts the number of these cases at 30 per cent. in school epidemics. These cases doubtless spread the disease, especially in schools.

In the presence of the present epidemic of scarlet fever, therefore, it is necessary to exercise great care in the examination of these cases. In many of the cases the distinctive appearance of the tongue and tonsils is our only guide—the prominent highly injected papillae, the furred coating through which the inflamed and injected papillae project and the red raw tongue after it has desquamated—the “strawberry tongue.” No other form of sore throat is attended with such an appearance of the tongue. In many of these cases the tonsils are greatly inflamed and occasionally covered with grayish patches which may be confused with diphtheritic membrane.

Tuberculosis.

The Academy has co-operated with the tuberculosis committee of the Civic Improvement League in conducting a clinic for the examination of persons suspected of having the disease. The clinic has been operated since February 1, 1919, and is open for examinations every Saturday.

Seventy-nine (79) persons have been examined and eight re-examined. Of these, four have been diagnosed as tuberculosis and four as suspicious. All suspicious cases have received instructions. The nurses have made 493 calls on tubercular cases.

A. H. Rockwell, Chairman.

REPORT OF SOCIAL COMMITTEE, 1919.

There have been fifteen luncheons at the Park-American during the year on the days of the scientific program of the Academy. The Kalamazoo Academy of Medicine entertained the Tri-State Medical Association on November 5th.

The average number of attendance at luncheons has been sixteen. Considering the attendance and the membership of the Academy this is a small average. We realize that it is difficult for a medical man to control his activities particularly when this luncheon must begin at 12:15 p. m., so as to finish in time for the afternoon program. At nearly every luncheon the out-of-town essayists, who have been men of wide reputation, have been entertained. To meet and to know some of these men is an inspiration and to be present to greet them cordially is to fulfill an obligation that every member should cheerfully assume. The Academy should not depend upon the committee alone to entertain our essayists. Some members have been very good to help the committee in the entertainment of guests. This has been greatly appreciated by the committee. We believe that the noon-day luncheon has become an indispensable factor in the development of a congenial spirit in the profession. The committee suggests that a smoker every month or two might further promote the social spirit. The committee sincerely hopes that the medical men of the city will make a continued effort to attend all social functions.

Committee: J. H. Vanness, A. W. Crane, C. B. Fulkerson, Chairman.

SOCIAL HYGIENE COMMITTEE.

As several well organized agencies have been constructively working along the lines of Social Hygiene in the city during the year, your committee has largely confined its activities to cooperation with these national, state and local

movements, including a furtherance of the work in our Public Schools and the formation of a layman's committee from which much good should come.

As formerly, numerous talks have been given by members to your committee.

Leroy H. Harvey, Chairman.

ESTIMATED BUDGET FOR 1920.

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| State Society dues | \$ 420.00 |
| Guests | 25.00 |
| Postage and stationery | 90.00 |
| Bulletin and printing | 220.00 |
| Library | 80.00 |
| Telegraph and telephone | 75.00 |
| Music and flowers | 25.00 |
| Light | 10.00 |
| Janitor | 35.00 |
| Repairs (book cases et. al.) | 150.00 |
| Sundries | 20.00 |

\$1,150.00

W. A. Stone.

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ST. CLAIR COUNTY.

At the last regular meeting of the St. Clair County Medical Society the following officers were elected for the coming year:

President—W. H. Morris.

Vice-President—M. E. Vroman.

Secretary-Treasurer—J. J. Moffett.

An elaborate banquet was held in the Hotel Harrington at which about forty members were present. The work of the Public Health Service was the main subject of discussion. The program for the ensuing year includes many specialists of repute as well as the contributions of the local members themselves.

John J. Moffett, Secretary.

Book Reviews

THE PRACTITIONER'S MANUAL OF VENEREAL DISEASES WITH MODERN METHODS OF DIAGNOSIS AND TREATMENT. A. C. Magian, M.D. Cloth. 215 pp. Price, \$3.00. C. V. Mosby Company.

This manual, the work of a British Officer, sets forth a practical outline of diagnosis and treatment. Other than that it presents nothing new and has no special feature of merit. In some respects it is disappointing and does not come to the standard of American texts. Its illustrations are crude.

THE SYSTEMATIC DEVELOPMENT OF X-RAY PLATES AND FILMS. Lehman Wendell, B.S., D.D.S., Chief of Photographic Work and Instructor of Prosthetics and Arthodontia, University of Minnesota. Cloth, 80 pp. Price, \$2.00. C. V. Mosby Co., St. Louis, Mo.

This is indeed a splendid manual imparting a compilation of dependable proceedings that will enable one to perfect a splendid technic. We know of no single volume that gives such a practical system. It appeals at once to every person who is engaged in X-ray work and will be welcomed.

MODERN SURGERY: GENERAL AND OPERATIVE. By J. Chalmers DaCosta, M.D., Samuel D. Gross Professor of Surgery, Jefferson Medical College, Philadelphia, Pa. Eighth Edition, revised, enlarged and reset. Octavo of 1697 pages, with 1177 illustrations, some of them in colors. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, \$8.00 net.

An up-to-date revision of a text to which we have all frequently turned for information and aid. One that has and always will be a part of every progressive surgeon and practitioners library and put to frequent use.

What we have said of former editions still applies—only this edition brings it up to our present viewpoint. May we have more texts like this.

MEDICAL ASPECTS OF MUSTARD GAS POISONING. By Alfred Scott Warthin, Ph.D., M.D. and Carl Vernon Weller, M.S., MD., both of the Department of Pathology, University of Michigan. Cloth, 156 illustrations, 267 pp. C. V. Mosby Co., St. Louis. Price, \$7.00.

There is here given the results of the author's independent research and also while engaged in a similar line of work for Chemical War Service Board.

As such it is a full discussion of the work performed and the results that supplied a basis for tenable conclusions. These conclusions are of extreme value to those who are called upon to treat the ex-soldier who has been exposed to mustard gas.

We have also a discussion of a splendid, patriotic and scientific research work that these men have accomplished.

ANAPHYLAXIS AND ANTI ANAPHYLAXIS AND THEIR EXPERIMENTAL FOUNDATIONS. By A. Besredka, Professor at the Pasteur Institute. Price, \$2.25. C. V. Mosby Company, St. Louis.

A clear exposition of the subject that is of importance in this day of increasing sero-therapy. Further comment is not called for.

THE AFTER-TREATMENT OF SURGICAL PATIENTS. Willard Bartlett, A.M., M.D., F.A.C.S. and Collaborators. Two volumes. Cloth. Price \$10.00. C. V. Mosby Co., St. Louis.

The first complete discussion and presentation of the entire subject of after treatment of a surgical patient that has come to our attention. The outcome of a patient is never solely dependent upon the operative attack alone. The result of an operation is very much dependent upon the post operative care. Many surgeons neglect this part of their work or delegate it to assistants. No one has ever covered the subject as completely as this author has done and imparted so many practical methods.

Here the young surgeon will find at his immediate disposal all that years of experience has taught the older men. To these the work will be of untold value. To those of advanced experience there is in store much that they may well utilize.

We predict a hearty reception for these two volumes wherein one obtains a wealth of practical proceedings.

SYPHILIS—A TREATISE ON ETIOLOGY, PATHOLOGY, DIAGNOSIS, PROGNOSIS, PROPHYLAXIS AND TREATMENT. Henry H. Hazen, A.B., M.D., Professor of Dermatology and Syphilology, Georgetown University. Cloth, 630 pp., 160 illustrations. Price, \$6.00. C. V. Mosby Company, St. Louis, Mo.

This is a most exhaustive review of the subject based upon the author's extensive experience and special chapters by experienced syphilologists. The work conforms to its title in every detail and covers the disease in every feature. As such it then becomes a valuable contribution imparting the entire present day attitude of the profession.

Careful study and reading of this book enables one to acquire a modern conception of the various ramifications of the disease and to institute proper treatment.

The work is commended most heartily.

Miscellany

GUNSHOT FRACTURES OF THE HUMERUS TREATED BY SUSPENSION AND TRACTION.

By Morris K. Smith, M.D., of N. Y. Late Capt. M.C., U. S. A. *Annals of Surgery*, Vol. LXX, October, 1919, No. 4.

The arm is supported in a sling from an overhead pulley. The forearm is suspended by glued bands in the same manner, but with attachment

further away from the body as its center is in a plain outside that of the arm, when the member is abducted. Traction is obtained by bands glued to the arm, the wound permitting, more often by a band encircling the arm just above the elbow, and attached by a pulley to the frame, or an abduction board placed under the mattress. In this way it is always possible to maintain the fragments in alignment by altering the angle of abduction and varying the relative suspension weights on the arm and forearm. In the few cases where abduction and traction alone do not correct a lateral deformity, lateral traction in opposite directions on the two fragments can easily be added.

The advantages of suspension and traction are:

1. Maintenance of favorable position from the point of view of circulation and drainage.
2. Ease and simplicity of dressings.
3. Comfort of patient.
4. Control and maintenance of reduction.
5. Earlier restoration of function.

While in the apparatus patients are taught to exercise both elbow and shoulder before union has begun. The wrist and hand are always freely movable. Massage is carried out from the start. The patients are kept suspended until union is sufficiently firm to allow them up without support. Once up, the ordinary case should not even be allowed a sling, so that complete mobilization of joints may be carried out as rapidly as possible.

Primary and Secondary Suture of Wounds.—The immediate or early conversion of a compound into a simple fracture represents an ideal, the attainment of which would mean tremendous curtailment of infection. One should be very conservative about attempting these procedures.

Resected shoulder cases should be maintained in wide abduction, so that, if union takes place between the end of the humerus and the scapula, abduction by means of the shoulder may be possible.

Where a good anatomical result is not obtained by the method of suspension and traction, it must usually be blamed on the surgeon, not the method. The position of the fragments can be controlled with accuracy. Until union has taken place, this position requires repeated checking, clinically and radiographically. This constant watchfulness is a point which an inexperienced surgeon is likely to forget.

Operative interferences (ordinarily sequestrectomies) were the cause of four refractures, and falls twice. Union usually takes place very rapidly in these cases, because callus is already present.

To summarize, suspension and traction in treatment of gunshot fractures of the humerus offers the following advantages: Favorable posture for treatment of wound; maintenance of reduction for any type of fracture; and early recovery of function. As in the treatment of fractures by any method, experience and painstaking supervision on the part of the surgeon is necessary to secure the best results. In a fracture ward, specially trained nurses should be employed. The more experienced one becomes in the use of suspension and traction in the treatment of fractures the more its possibilities challenge interest and effort, and the better will be the results obtained.

Leo C. Donnelly, Detroit.

ANALYSIS OF BLOOD OF INSANE PATIENTS.

Summary:

The blood of epileptic, dementia praecox and manic-depressive patients shows no deviation from the normal content of total nitrogen, non-protein nitrogen, uric acid, urea, creatinin, creatin, glucose, chlorin, or calcium. (Arch. of Neural. & Psych., Feb., 1920, Paul G. Weston.)

A CASE OF MENINGO-ENCEPHALITIS (LETHARGIC ENCEPHALITIS).

Summary:

From the clinical standpoint our case was one of meningo-encephalitis with lethargy and involvement of the motor fibers of the third, sixth, seventh, tenth and twelfth cranial nerves.

The etiologic cause was a gram-negative motile bacillus, unidentified, but probably belonging to some intermediate class of the colon-typhoid-enteriditis group.

Pathologically, the lesion demonstrated septic meningo-encephalitis and ependymitis, with punctate hemorrhages and perivascular cell infiltration of the centrum ovale, corpus striatum, and optic thalamus. (Arch. of Neurol. & Psych., Feb., 1920, W. W. Hala and C. M. Smith.)

FACTS ABOUT CANCER.

Cancer is unquestionably increasing throughout the world.

At the beginning cancer is usually painless and difficult to detect.

At its first small growth it can be safely and easily removed by a competent surgeon.

Cancer is not a constitutional, or "blood" disease.

Cancer is not contagious.

Cancer is, practically speaking, not hereditary.

Every lump in the breast should be examined by a competent doctor.

Persistent abnormal discharge or bleeding is suspicious.

Sores, cracks, lacerations, lumps, and ulcers which do not heal, and warts, moles, or birthmarks which change in size, color, or appearance, may turn into cancer unless treated and cured.

Probably 60 per cent. of cancers of the rectum are first regarded as piles. Insist on a thorough medical examination.

Continued irritation in some form is the usual cause of cancer. It rarely results from a sudden injury.

A doctor who treats a suspicious symptom without making a thorough examination does not know his business.

CANCER IS INCREASING.

Cancer, probably the most dreaded of all diseases, is on the increase in America and throughout the world in spite of the fact that it is curable if treated early, says the United States Public Health Service. In its death toll in the United States cancer already ranks among tuberculosis, pneumonia, heart disease and diseases of the kidney, and it is much more feared than any of these. This is because of the ignorance of the public, the difficulty of detecting a cancer in its early stages and the fact that when it has reached the recognizable stage it has gone beyond the curable stage.

The medical world today believes that work for the control of cancer should be largely similar to that so successfully carried on in tuberculosis; that is, it should consist mainly in widespread education of the general public to recognize cancer in its precancerous state, it should

train the people at the first alarm to seek the advice of a competent physician, and it should keep the public freely advised of the latest scientific knowledge concerning cancer, its causes, prevention and cure.

The first and most important requirement in such a campaign of education is that the public change its viewpoint. The United States Census Bureau for 1917 gave a total of 61,452 deaths from cancer as compared with 112,821 from pneumonia, 110,285 from tuberculosis, 115,337 from heart disease and 80,912 from kidney diseases. So it will be readily seen that cancer already ranks among the leading causes of death in this country.

Cancer is apparently increasing. The recorded death rate shows about two and one-half per cent. more cases every year. It has risen from 62.9 deaths per 100,000 of population in 1900 to 81.6 in 1917. Some of this increase is unquestionably due to an improvement in recording and gathering vital statistics and to better diagnosis, but it is generally believed that these factors do not alone account for the increase.

Cancer, if discovered early and treated immediately by a competent physician and surgeon, is now regarded as a curable disease. Unfortunately the early discovery is difficult. Unlike almost any other disease its first attack is usually painless, and often, therefore, before the disease is discovered it has reached the stage where a major operation is necessary and the chances of cure have been greatly reduced, if not entirely lost. Another unfortunate circumstance is that in many cases when a person realizes he has cancer he fails to seek the best medical treatment. Advertising quacks and patent medicines, claiming phenomenal cures, loom up like a last ray of hope to the afflicted. As a matter of fact their treatment invariably aggravates instead of helping and when competent physicians are finally consulted the case is really beyond any hope of recovery, or arrest.

The belief that cancer is contagious has caused untold suffering and occasionally cruel neglect of the unfortunate sufferers. So far as it has been possible for scientists to learn there is no germ capable of causing cancer in human beings or animals. In communities where the cancer prevalence is higher than in others it has invariably been traced to the fact that most of the young

people had left the community. Since cancer is a disease of middle age the higher rate was to be expected. There is no case on record in which either an operating surgeon, or nurse, has contracted cancer from coming into contact with it, even after years of work exclusively in this field.

Another popular myth that seems to be pretty well exploded is that cancer is hereditary. No argument could be more convincing than the way life insurance companies look at this aspect of the disease from a business point of view. In deciding whether a person is a "good risk" these companies disregard evidence that cancer occurred in one or both parents, or in other ancestors. Their carefully-kept statistics covering many years prove that the person to be insured will not necessarily contract the disease. Indeed the insurance companies say there is no cause for apprehension even if both parents died of cancer. The most that could be fairly argued is that people whose families seem particularly susceptible to cancer should well inform themselves with regard to early symptoms and be on the alert for the first danger signal.

The tissues of the body, the muscles, the glands, the bones, are each composed of a very large number of very tiny cells, which may be compared to the brick in a building, and they are held together by a material which may be compared to the mortar. However, the body cells are alive, constantly growing and dying off, according to certain laws which we do not completely understand. Sometimes these cells begin to grow and develop along lines which are not in harmony with the usual order. A little group of the cells forms a lawless colony, which constitutes an unhealthy, growing spot in the body. This may occur on the skin, in the breast, stomach, throat, or in any part of the body. Frequently they form a little hard lump which can easily be detected by touching it and which can very easily be removed by the physician. If this mass is not removed at once it usually continues to grow and to branch off into the surrounding tissues. This penetration marks the difference, the fatal line between the benign or harmless growths like warts, and malignant growths or cancers. Finally a large mass is formed and

minute portions become detached and are carried to other parts of the body. When ordinary cells become detached and get out of place they usually die. Cancer cells, on the other hand, have such power of survival they continue to grow wherever they are deposited and new cancers are the result.

Cancer often arises after continued, long irritation of various kinds and in and about benign growths, or ulcerations. Cancer of the lip and mouth has been known to come from burns, from pipe stems, from constant irritation from bad teeth and among East Indian races from chewing the betel nut. Cancer of the external abdomen in the natives of Kashmir, never observed among other races, arises from burns from kangri baskets of live coals which these mountaineers wear as a kind of warming pan. Cancer of the oesophagus is observed in the Chinamen who eat their rice too hot, while it is absent in the women who eat their rice cold at a "second table."

Women, unfortunately, are most susceptible to cancer. Between the ages of 35 and 43 three times as many women as men die of cancer, and between 45 and 50 twice as many die. They should, therefore, be especially educated to recognize the first signs of a benign growth and consult a physician at once. Persistent ulcerations, cracks and sores, warts, moles, or birthmarks which change in appearance, or grow larger, should be removed. All forms of chronic irritation should be prevented.

While no one in particular can be said to be susceptible to cancer it can truthfully be said that so far as is known no one is immune to it and statistics leave no room to doubt it is on the increase. The time has come when the general public should be educated as thoroughly as in the nation-wide campaign for the control of tuberculosis.

To aid in this work the United States Public Health Service has carefully prepared a neat, pocket-sized booklet, "Cancer, Facts Which Every Adult Should Know," written in lay terms. This book will be forwarded on application to the Public Health Service, Washington.